

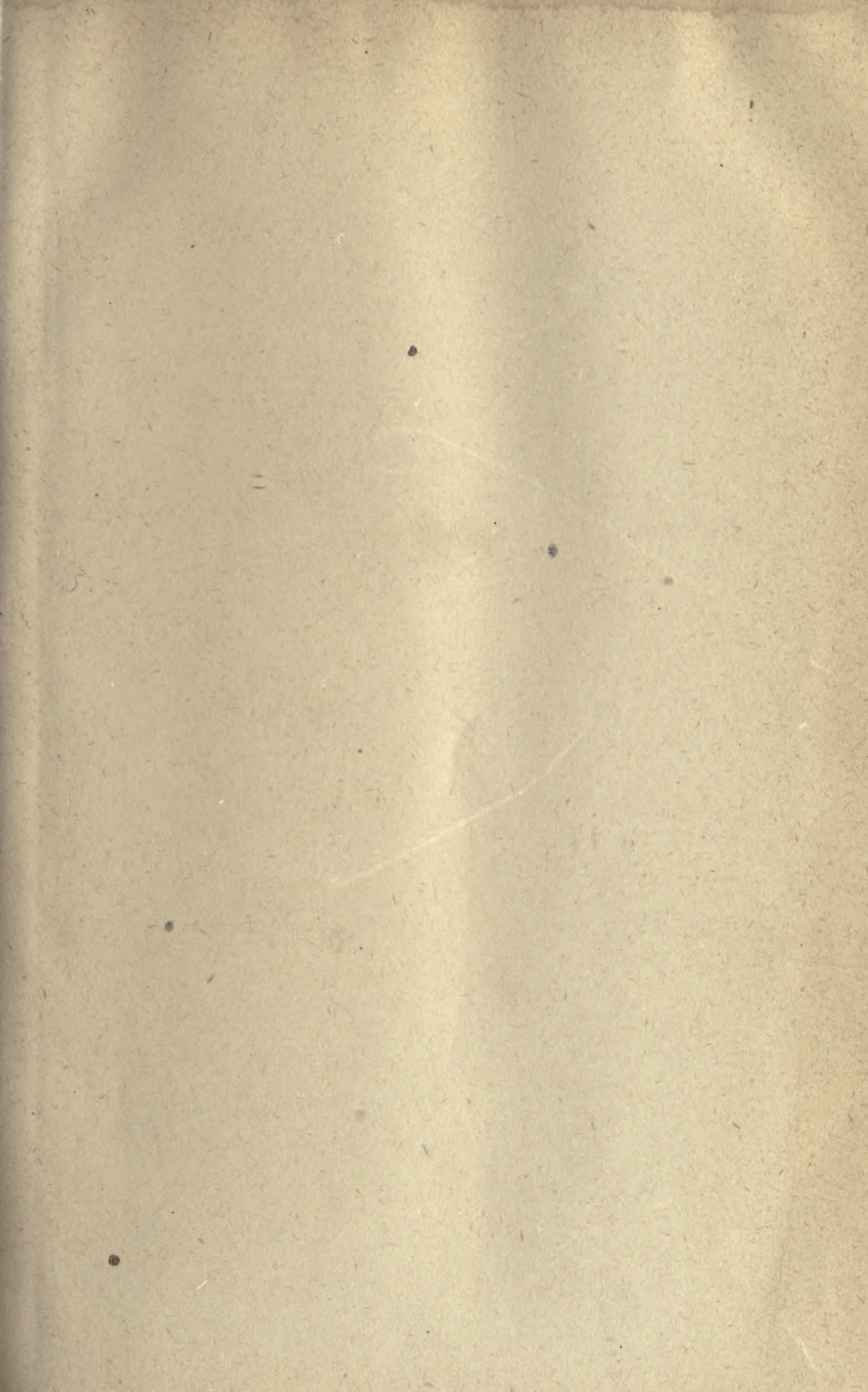
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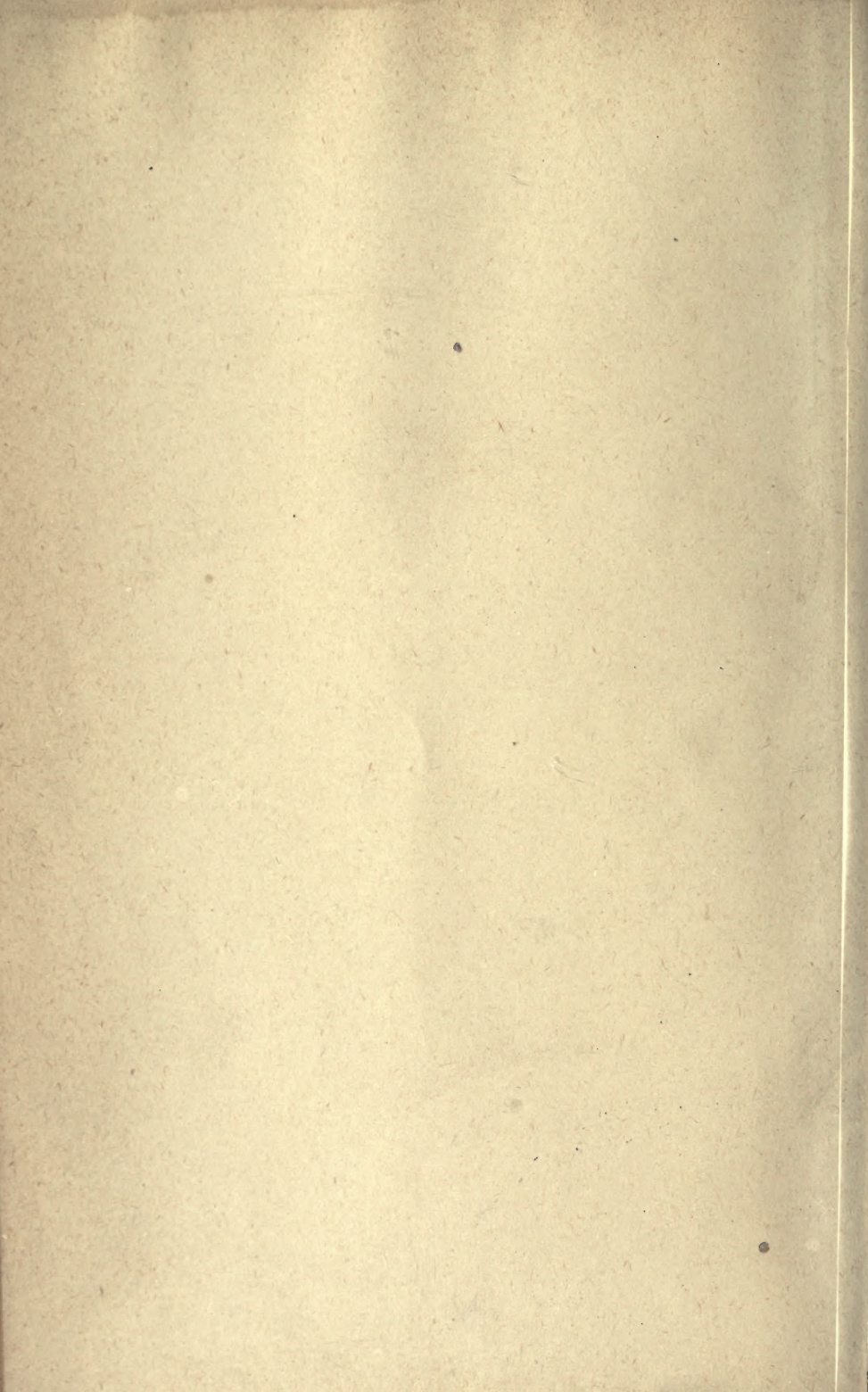
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THE
CINCINNATI
MEDICAL NEWS

EDITED BY

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VOL. XXIV., Old Series.

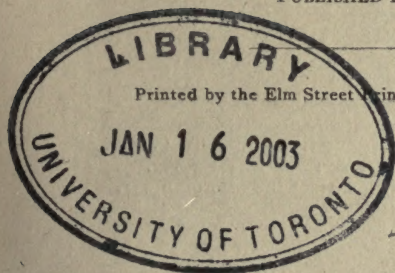
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{ VOL. XX. No. 1.
New Series.

Original Contributions.

The Diagnosis of Early Ectopic Gestation.

BY J. M. BALDY, M.D., OF PHILADELPHIA.

In following me into a discussion of this subject I wish it to be distinctly borne in mind that what I have to say is applied to ectopic gestation only in its earliest stages, namely, in that period when the rupture is liable to take place from the tube into the broad ligament, or into the abdominal cavity, as well as the period immediately following the rupture.

It would seem from this that I accept the views of Mr. Tait as to the pathology of extra-uterine pregnancy, and, with a few reservations, this is the fact. My whole line of argument will be based on the premises that the conception has taken place in one or other of the Fallopian tubes, or has subsequently found its way there, and has there developed. I do not wish to be understood as denying that there is such a condition as ovarian or abdominal pregnancy, but for our present purpose we may safely ignore that phase of the question altogether, because in the early stages of the disease with which we are dealing the three conditions could hardly be differentiated. It is certain that an overwhelming majority of the cases are tubal in their incipiency, and if an occasional case is either of the other two varieties, it can not make the slightest difference from a diagnostic and therapeutical point of view.

In this discussion I propose to ignore, to a great extent, the ancient literature of the subject. However valuable this has proven in times past in establishing the pathology of extra-uterine pregnancy, it is to-day of far less value from the point of view of this paper than the experience and literature of the last few years. I infinitely prefer the testimony of men who have made their observations with a pretty clear idea of the pathology and frequency of this and

allied diseases, to that of men who were groping in the dark with little or no idea of this or any of the many diseases with which it may be and has been confounded. With the recent data, then, to supplement my own personal experience of more than twenty cases of early ectopic gestation, I shall be satisfied to draw my conclusions.

The symptoms of this disease have been variously classified, and it is claimed that if a certain number of them be grouped together in the same patient, the presence of the abnormal gestation is assured. In considering these symptoms we will take them as nearly as possible in the order of their importance.

Menstruation.—This may be absent for one or two periods, and then a spurious flow appear which is at first lighter and finally darker in color than normal. It is irregular, prolonged, and contains, after awhile, clots and shreds. There may be no missed period at all—simply a prolongation of the normal flow, with the above characteristics. I have had patients in whom this spurious menstruation did not appear at all; in whom there was neither a scant nor prolonged flux. To a great extent this depends on the period in which the patient is seen; the earlier, the less likelihood of irregularities. Often the patient gives a history of similar irregularities, and one is very apt to be misled by this fact.

Pain.—This pain is of a somewhat different character from other pains to which women are liable. Early in the growth of the gestation-sac the pain is slight, and occurs at long intervals, and as a rule not much notice is taken of it. Often it disappears altogether for a few weeks, and would be forgotten but for its reappearance in redoubled force. It is intermittent in character, cramp-like, becoming more and more severe, and more and more frequent. At times it becomes so severe as to cause syncope. Its situation is almost invariably pelvic, and low down in the abdomen. It can be safely said that this symptom is invariably present. As a rule, it is the one thing which forces the patient to seek the advice of her physician. Of all the individual symptoms this one has proven of most value to me in recognizing the true condition. This almost characteristic behavior of the pains in connection with the behavior of the menstrual discharges when they are abnormal should always put one on his guard, and force him at least to weigh carefully all the *pros* and *cons* before dismissing the possibility of ectopic gestation.

Expulsion of decidua.—The decidua may be thrown off in the shape of shreds, and mixed with clots of blood, or, which is more usual, after a few days the shreds may come away in one good-sized mass. This symptom is theoretically of the greatest importance, and when it is demonstrated is conclusive (of pregnancy). Practically, its value is in the majority of cases lost. As a rule, we must depend on the statements of the patient in regard to the matter, and these statements are too often worthless. I find that patients do not observe closely enough, or are so ignorant as not to be able to distinguish between blood-clots and other things. Again, the decidua is often lost in the water-closet or in a vessel-full of clots. I have known women to declare they were discharging shreds, when a careful examination failed to reveal a sign of one. Taking it all in all, I do not attach much value to this sign—realizing, however, its great importance when it can be properly demonstrated. Its absence is usually in the early weeks of the disease.

General signs of pregnancy.—As a rule, these are the reflex, gastric and breast symptoms of normal pregnancy, as well as the bladder and rectal disturbances of the same condition. The same symptoms may be present in women who are not pregnant, and may arise from almost any cause of irritation in the genital canal, and are only too frequently present in such diseases as ovarian cyst, pyosalpinx, etc. Standing alone they are worthless for determining pregnancy, especially the extra-uterine variety.

Period of sterility.—As a rule, the patient gives the history of having had a child or miscarriage some years previously, and of being sterile since then. This is not always the history, however, as some women conceive with the foetus extra-uterine soon after the first pregnancy.

Vaginal discoloration.—The vagina almost invariably has the usual discoloration of pregnancy.

Cervix.—The cervix is usually enlarged and soft, and the os is patulous; but I have noticed an absence of these symptoms in several cases, and they can not be considered as at all constant.

Body of uterus.—The fundus is enlarged and softened, and usually crowded either far forward against the pubic bone or pushed to either side. It is more or less immovable. Like the cervical signs, however, these conditions are not constant. I have studied patients for several weeks at a time, in whom the uterus was normal in every particular,

trying to arrive at a diagnosis, and yet ectopic gestation was finally proven to be present.

Uterine appendages.—At times an examination of the appendages of one side is absolutely negative, while on the opposite side a tense, adherent, tender cyst is present. In several cases I have found this cyst almost in the median line, posterior and apparently so continuous with the cervix as to make it impossible to find any dividing-line between them. In one case the fundus was so high and so far back as to seem to be a part of the cyst. On the other hand, cystic masses (apparently characteristic) will be found on both sides, one proving to be an ovarian cyst, an ovarian abscess, a pyosalpinx, or a dermoid cyst, the other being demonstrated to be a tubal pregnancy. All these conditions I have seen, and have studied with the specimens in my hands. The local condition is so varied and deceptive that only corroborative evidence can be obtained from it. The ectopic gestation-cyst, if kept under observation, increases very perceptibly in size from time to time, but it is exceedingly dangerous to wait and watch for this symptom.

Pulsation of the cyst.—I have studied the disease with reference to pulsation, and in spite of what others have said as to its importance, I have been unable to find the slightest thing characteristic about it. The pulsation is present in so many pelvic conditions, especially in distended Fallopian tubes, that I have found it worthless as a diagnostic sign in this disease. In proven cases of ectopic gestation, in my experience, it was present in some and absent in others.

Ballottement.—I have never been able to observe this sign in any case, nor have I seen a specimen earlier than the third month in which I think it could have been demonstrated. The number of cases in which it is claimed that it has been observed is small, and to me it is of very doubtful value as a diagnostic aid.

The patient considers herself pregnant.—In the majority of cases that I have seen the women did not think they were pregnant, or at least were very uncertain when questioned on this point. Only two or three of my patients stated positively that they thought themselves pregnant, and we all know how often women think themselves so when they are not. I can not believe that this point is of much value in diagnosis.

Temperature and pulse.—A number of times I have noticed a persistent and considerable rise of temperature and

increased pulse-rate, and the patients have occasionally complained of feeling chilly. The elevation of temperature is due, no doubt, to the local pelvic inflammation which so often accompanies this condition, and which causes the adhesions almost always met with.

When we come to the period of rupture, symptoms of great pain, followed by collapse, and all the signs of concealed hæmorrhage, make the presumptive diagnosis easy, especially when taken in connection with the past history.

It would be natural to suppose that if a number of these symptoms presented themselves in the same patient, a diagnosis of extra-uterine pregnancy could readily be arrived at. Such is the belief of some of the profession. Reeve states that "in a patient presumably pregnant, having had more than one such attack as this [he refers to the paroxysmal pains], and having a tumor to be felt *per vaginam*, there could scarcely be a doubt of the existence of extra-uterine pregnancy." My own experience has taught me the fallacy of this, and I am coming more and more to regard my position taken in a previous paper as the true one. In that paper I made the three following propositions:

1. In a certain proportion of cases of extra-uterine pregnancy, in the early stages, the diagnosis is easy and unmistakable.

2. In a certain (quite large) proportion of cases sufficient symptoms are present more than to warrant a diagnosis of extra-uterine pregnancy, such a pregnancy not being present.

3. In a certain other proportion of cases the symptoms, until rupture has occurred, are entirely wanting, or are of such dubious character as in nowise to warrant such a diagnosis.

The following history is that of a patient who passed under my observation:

CASE I.—Mrs. X., aged twenty-six years; married for seven years. Had one child six years ago. Puerperal trouble followed confinement, and she has not been pregnant since. Two and a half months ago she missed her menstrual period, and soon began to develop symptoms which made her think she was pregnant. In the course of about six or seven weeks she began to have a bloody vaginal discharge, which finally contained shreds and clots. About this time pains, which had been present in slight degree, became severe and paroxysmal. On account of the bleeding and pain she applied to me for advice. On close

questioning she acknowledged having passed a mass, but was doubtful whether it was blood-clot. A vaginal examination revealed a softened cervix, a slightly-enlarged uterus, with a tense, adherent, tender cyst on the right side, the uterus being crowded to the left. A diagnosis of tubal pregnancy was made, and the gestation-sac removed two days afterward.

This case presents a line of symptoms which apparently could lead to but one conclusion, and so the event proved. But contrast this case with the two following, which occurred in my practice:

CASE II.—The patient presented general and reflex symptoms of pregnancy, such as swollen and painful breasts, containing milk; morning nausea; enlarged abdomen; frequent micturition; constipation, etc.; and had missed one or two periods. The patient thought herself pregnant, though she had not been pregnant for some years. There was irregular bleeding for a week or two, with colicky pains in the abdomen, and the passage of blood and shreds *per vaginam*. Examination showed a cystic tumor to one side of the uterus, painful to the touch. The patient was seen by Dr. J. Price, and several other men, all of whom concurred with me in the diagnosis of undoubted extra-uterine pregnancy. Several days afterward an operation disclosed an ovarian cyst as large as an orange.

CASE III. presented general and reflex signs of pregnancy almost the same as in Case II. She had not been pregnant for years, when she missed a period; had profuse bleeding with clots and shreds, and severe pelvic pains of a colicky character. Examination disclosed a pelvic mass at the side of the uterus, evidently a distended tube. A diagnosis of extra-uterine pregnancy was made by Dr. Kynett, several other men and myself. Operation in a few days by Dr. Penrose disclosed pyosalpinx. The following cases simply emphasize what my own cases prove:

CASE IV.—Mrs. D., a patient of Dr. Weeks, of Trenton, N. J.; married for four years; never pregnant; menses always regular, and not painful. One week after her January period she noticed dull pain in the lower part of the abdomen, followed in another week by sick stomach and all the symptoms of pregnancy. Her menses were absent for six weeks, when she was suddenly seized with severe pain and a flow. The woman finally took to her bed. The discharges seen by both doctor and nurse were lochial in character, and

contained shreds. A tender cystic mass was found to the left and posterior to the uterus; the fundus was crowded forward and to one side. A diagnosis of extra-uterine pregnancy was arrived at, and I was asked to see the patient. I found everything as narrated, and verified the diagnosis. Two days later abdominal section disclosed a large pelvic (intra-peritoneal) abscess. The Fallopian tubes and ovaries showed no signs of having been impregnated.

CASE V.—Mrs. K., a patient of Dr. B. C. Hirst, aged twenty-five years. Her last child was born two years ago; menses were absent for two periods, but had returned some time before being seen by Dr. Hirst. History of discharge of clots and membrane, with great pain in pelvis and abdomen. Examination showed the uterus enlarged, and displaced to the right side; os patulous; and a tumor in left broad ligament the size of an egg. Extra-uterine pregnancy was diagnosed. At the operation which followed a broad-ligament cyst was removed. The woman afterward passed remnants of an abortion.

Dr. Joseph Price, in a patient sent to him by Dr. Garrett, of Germantown, found a mass on the left side of the pelvis as large as a three months' uterus. The woman had been married for ten months; the menses ceased three months after marriage, and she had all the symptoms of pregnancy. There was absence of two periods, followed by hæmorrhage and pain. Extra-uterine pregnancy was diagnosed. Abdominal section revealed a small suppurating cyst of the right ovary, with an adherent hydrosalpinx.

Dr. H. C. Coe reports the case of a woman whom he saw in consultation. She had missed two menstrual periods, and presented the subjective symptoms of pregnancy. One day she had an attack of violent pain in the abdomen, with evidences of collapse. A mass was found on the right side of the uterus, which gradually increased in size week by week. She had a bloody discharge from the vagina. A sound was passed into the enlarged uterus a number of times, and both the galvanic and faradic currents were applied. The uterus was enlarged, the cervix soft, and the os patulous. The tumor was fixed and fluctuating. Finally, she had another attack of pain, with apparent collapse. Extra-uterine pregnancy was diagnosed. Abdominal section revealed a normally-pregnant uterus, with a large adherent ovary on the right side.

Dr. G. W. Johnston reports the case of a patient, aged

twenty-two years, who, shortly after the cessation of a monthly period, began to suffer from nausea, frequent micturition, and colicky abdominal and pelvic pains. Her breasts were tender, the uterus enlarged and anteposed; on the right side of the uterus and posterior was a round, exquisitely tender, semi-fluctuating tumor, the size of a lemon. The attacks of pain were paroxysmal, and on several occasions were almost followed by collapse. She had a vaginal discharge which contained shreds. Extra-uterine pregnancy was diagnosed. Abdominal section revealed a tubo-ovarian cyst the size of a lemon.

W. Gill Wylie says that he has operated on three cases in which the diagnosis of extra-uterine pregnancy had been made, in two of which a supposed cure by electricity had been recorded, and at the operation no sign could be found of ectopic gestation having existed. The cases were simply those of Fallopian tubes dilated with fluid, one tube containing over two pints of fluid.

An article by Vander Veer discloses two cases (Mundé and Janvrin) of pregnancy in one horn of a bicornate uterus, which were mistaken for ectopic gestation. He also reports two cases (Warren and Vander Veer) of normal pregnancy, mistaken for ectopic gestation.

It certainly is unnecessary to produce more evidence than this in order to convince the most skeptical that the symptoms of extra-uterine pregnancy are very often present when the disease is anything but an ectopic gestation. I am ready to grant that all the symptoms which we have considered as being produced by this disease were not present in each of the cases presented; but in what disease in the whole range of medicine are all the symptoms present in one case?

The most prominent and valuable points are noted in each case, viz.: the subjective signs of pregnancy, the pains, the missed menstrual period, and the bloody vaginal discharge containing shreds or masses, together with the cystic tumor in the region of the broad ligament. A study of these cases will show most decidedly that no other conclusion could have been arrived at in any single case, and in addition, the names of the attending physicians are a sufficient guarantee that the symptoms and history were carefully weighed. There are many more such cases on record, and very many which are not but should be.

It is interesting in connection with this to note the large number of diseases which have been mistaken for ectopic

gestation in its early stages. Dr. T. Gaillard Thomas says: "There are few pelvic conditions which develop in the female, from phantom tumor to fæcal impaction, which I have not seen confounded with ectopic gestation." Amongst the few cases I have reproduced in this paper the mistake was made in cases of ovarian cyst, pyosalpinx, pelvic abscess, broad-ligament cyst, ovarian abscess, normal pregnancy, pregnancy in one horn of a bicornate uterus, and tubo-ovarian cyst. These are not all of the diseases which may be so mistaken. If the mistake is to be made in one class of cases oftener than another, I believe it will be in patients in whom an abortion has taken place, followed by a pelvic tumor (abscess or pyosalpinx)—or a pelvic mass may have existed formerly and unknown—the facts of the abortion being unknown or concealed. The case of Dr. Weeks, as quoted above, was such a one.

Now, with all these chances of mistake in diagnosis, have we considered all the possible errors? By no means. We still have to consider those cases in which extra-uterine pregnancy exists, but is not suspected, and cases in which it was taken into consideration, but was dismissed for lack of sufficient evidence. The case which occurred in my own practice illustrates these points very well:

CASE VI.—Mrs. R. came to me complaining of abdominal and pelvic pain. After giving a negative history she was placed on the table, a diagnosis of pyosalpinx was made, and an operation advised. One week later she sent for me, and I found her upon her bed. She said she had had abdominal pains during the entire week. She arose from her bed in order to obtain a letter. While on her feet she was seized with colicky pain. As I watched her the idea suddenly seized me that possibly this might be extra-uterine pregnancy. I carefully examined her with this possibility in view.

She had been bleeding, at times, for more than two weeks; the flow was pure blood, with no shreds or clot. She had not the slightest general or reflex signs of pregnancy; her husband had been away for only three weeks; she had not missed a period, nor had she had a scant one; and she had had children for the past six or eight years at regular intervals.

The examination showed the uterus in good position, and the cervix perfectly normal for a multipara. There was a mass posterior to and apparently continuous with the cervix,

so that I had not been able clearly to feel the fundus anteriorly. I should have considered the mass the fundus. The only symptoms I had then for diagnosis were the bleeding and the pain. These symptoms are such constant and almost invariable companions of all serious pelvic troubles, that without something more to sustain the diagnosis it had manifestly to be given up. Dr. R. H. Hamill made a most careful examination for me, and could find nothing more on which to base a diagnosis; in fact, he did not think that it was a case of ectopic gestation. Our reasons for the diagnosis of pyosalpinx were the absence of symptoms of extra-uterine pregnancy, and the facts that the woman had been complaining of pelvic pain for the past three or four years, had pain at her menses, and painful coition and defæcation. She had had more or less leucorrhœa, which had suddenly become profuse, with itching about the vulva and painful micturition. She was in that condition of life in which one would expect her husband to infect her almost certainly with gonorrhœa. She had a high temperature and pulse, and chilly creeps. Taking it all in all, the indications were clearly for pelvic inflammatory trouble, and against extra-uterine pregnancy. It proved to be pregnancy of the fimbriated end of the tube.

The New York Academy of Medicine.

FRANCIS DELAFIELD, M.D., CHAIRMAN.

SECTION ON THEORY AND PRACTICE OF MEDICINE.

THE INDICATIONS FOR TREPHINING IN EPILEPSY.—Dr. J. C. Minor read a paper on this subject. By the administration of drugs, and the careful regulation of diet, exercise, and general hygienic measures, he said, we might hope to cure about one-half of all cases of epilepsy, which experience had shown was not an affection that disappears spontaneously. It was among the other half that surgical interference had its field. While, however, all epileptics are subjected to medical treatment, only a small proportion of those unrelieved by such treatment came under the observation of the surgeon. Of these, a majority were rejected, as not appropriate subjects for operation; but of those who were operated on, more than one-half were cured, over

one-sixth were relieved, about twenty per cent. died, about three per cent. were neither better nor worse for the operation. Within the last ten years the mortality had been largely decreased by the application of antiseptics to brain surgery, and the favorable results had increased in equal proportion.

The conclusions reached by Dr. Minor from his study of the subject were as follows: "We have, then, three main indications for trephining in epilepsy that hold good, provided medical treatment or the removal of peripheral irritation by other methods fails to cure or relieve.

"1. In the distinctly traumatic epilepsies following depressed fractures and other lesions of the skull.

"2. In the traumatic epilepsies in which the only visible lesion consists of a scalp wound that is sensitive or tender, and upon which pressure develops either an aura, vertigo, or an epileptic seizure.

"3. In all epilepsies, whether traumatic or not, in which the character and development of the seizures is such as to indicate a definite motor area as the seat of a cortical lesion."

The contraindications, he went on to say, were in brief those that might be applied to cases of such long duration as to lead to marked mental degradation, to cases in which from the first the seizures had been general and sudden, to cases where the general symptoms indicated an extensive cerebral degeneration, and to cases where, in addition to any or all of these conditions, there was nothing in the symptoms or history of the case to indicate a definite or circumscribed lesion of the cortex that could be reached and removed.

As regards the whole subject of trephining in epilepsy, while there was good reason for satisfaction with the results of surgical treatment in these cases, he was quite sure that one of the plainest lessons taught by all this experience was that of the added dangers and difficulties that arose from unnecessary delay in resorting to surgical treatment. Certainly in traumatic epilepsy it was unwise to wait until the increased frequency of the seizures had reduced the patient to an imbecile or idiotic condition before adopting surgical methods of relief. Long before this stage had been reached, any competent physician could determine with sufficient accuracy the prognosis of a case of epilepsy under medical treatment; and the proper time to operate

began as soon as it became evident that other methods were ineffectual. While it was unwise to advocate undue haste in operating upon these cases, it was equally wrong to defer the operation to such a degree as to materially diminish the chances of recovery.

Surgeons themselves had been led to delay the operation, because the mental symptoms were not very marked, because the seizures were not repeated every day, because the progress of the disease was not rapid; and, finally, after all this had been reversed, the mind impaired, the seizures frequent, and the progress of the disease accelerated, so that the patient's chances of recovery had been greatly diminished by these complications, then the failure of the operation to relieve the condition had contributed to the very prejudices and conservatism that had distinguished the treatment. There could be no question, he thought, that the best results follow the earliest operations, and these results applied not merely to cure or relief, but also affected the question of mortality. It was, therefore, important to bear in mind that the persistence of the primary lesions has a marked influence in determining later and graver symptoms, and that if an operation was needed at all, the sooner it could be done the better for the patient.

DISCUSSION.—Dr. Robert F. Weir said that nothing could be added to the rules for surgical interference laid down by Dr. Minor in his paper. The indications thus presented would, he thought, be accepted as judicious by all the principal authorities of the present day, and were in entire accordance with those given by Bergmann in his last lectures. While he had had quite a number of cases himself, he did not feel at all justified in speaking on this subject from his own experience, and he did not think any one, not even excepting Horsley, had met with a sufficiently large number of cases to enable him to arrive at any positive conclusions from such experience alone. There was one point which was somewhat discouraging, and that was the fact that the mortality from operations still remained so high, ranging from twenty to fifty per cent. It must be remembered, however, that brain surgery was as yet a comparatively new field, and that many of the fatal results occurred under the hands of those who were operating for the first time. Even among the more experienced operators he thought more violence than was necessary was not infrequently employed. But these were errors which would be

corrected, at least to some extent, as time went on, and he had no doubt that in the future better results would be reported than had as yet been attained.

Dr. Robert Abbe, who was to have taken part in the discussion, was unable to be present, but sent a note in which he said: "My experience is limited to two trephinations for traumatic and two for idiopathic epilepsy. The cases of idiopathic trouble were victims of degenerating mental state, both being boys of about twelve years. One was often violent after his attacks. I operated less than a year since upon him. The attacks ceased, and his mental state greatly improved. After six months there was a return of his malady, and he required restraint in an asylum. At the operation I opened the dura and found the meninges in a condition of engorgement, and also oedema, suggesting a low grade of inflammation, or at least one of irritation.

"The second case I operated on only three weeks since. There were half a dozen attacks daily. The meninges were also in much the same condition as in the former case. The attacks ceased at once. Primary union of the wound occurred, and the lad was taken to Nova Scotia by his father, who is a physician. No recurrence has yet been reported.

"I feel strongly conservative in regard to the operation for functional epilepsy; but believe it may, and should be, tried, with expectation of temporary relief at least, in cases of a severely progressive or degenerating type."

Dr. E. D. Fisher said that many of these traumatic cases occurred in children affected with spastic hemiplegia. Although in so many of the cases there was a one-sided lesion, the attacks for the most part were general in character, not being in any way localized. He had had himself some thirty or forty such cases. When a scar was present it was generally found that no change whatever was produced by pressure on the scar. It was a question, therefore, whether the removal of this scar would be warranted, or would be a good thing to accomplish. In these cases of epilepsy with spastic hemiplegia in children it had been advised to trephine, and reports had been published to the effect that, as a result of the operation, the mental condition had improved and the seizures had disappeared.

There were one or two questions which he said he would like to put to Dr. Minor. In the first place, when a scar

was present, but when no irritation apparently resulted from it, and the attacks were general in character, would he advise operation? In the second place, he would like to ask whether trephining, irrespective of any local seizure, would be warranted. This he knew had been done, and if the operation was performed with ordinary care and adequate antiseptic precautions, he did not think it was attended with any special danger. It seemed to him that in these extreme cases we were justified in trying to do something for the relief of the patient.

He then mentioned a case that he had met with where the epilepsy resulted from the kick of a horse. In such a case, he said, we would naturally expect to get good results from operating. Yet, after a few weeks subsequent to the trephining the patient was as bad as ever, and there had been no improvement since. The point of chief interest to him about this whole matter was whether in idiopathic epilepsy without a localized seizure we are warranted in resorting to operative interference. His experience would certainly teach him that in instances where blows or other injuries apparently lie at the bottom of the trouble, the cases are apt to go on to general epilepsy.

Dr. M. P. Jacobi called attention to the suggestiveness of a case reported by Dr. W. W. Keen, to which Dr. Minor had referred in his paper. It was as follows: In 1888 an epileptic was sent to Dr. Keen, for operation. Being in doubt as to the existence of a depression, he first made an exploratory incision in the scalp. He then lifted a flap and found nothing. The operation was performed under strict antiseptic precautions, and the wound rapidly healed without any rise of temperature. One month later the patient was trephined and the cerebral centre for the left hand and wrist excised. During this operation it became necessary to invade the territory covered by the flap of the exploratory operation. Under this area the dura was noticeably more adherent to the bone than elsewhere. This, said Dr. Minor, taught the important lesson that a marked lesion within the cranium may follow a slight traumatism on the exterior; and it followed that if Keen's exploration of the scalp, so carefully done and so perfectly healed, was followed by a lesion as marked as he described, we might reasonably expect that in many scalp wounds, where no such surgical skill or attention was received, the adhesions of the dura beneath the point of injury might, as Macewen

termed it, "anchor the brain to the bone," and thus become a potent factor in the production of epilepsy.

Dr. Fisher said that it had always seemed strange to him that while injuries to the brain frequently caused epilepsy, surgical operations upon it were not followed by this affection. He had never seen epilepsy produced as a result of experimental investigations upon the brains of animals, such as dogs, monkeys, etc.

Dr. Landon Carter Gray said that, like Dr. Weir, he thought that Dr. Minor had presented the subject with good judgment. But still the question arose at the very start, What is epilepsy? We know very well that it was merely a symptom, just as fever and cough were. We might search through the whole field of neurology, however, without being able to find out what it was a symptom of. This was a point that had never as yet been determined. Another question of importance was, Whether, when a reflex, peripheral, or other cause had been removed, the epilepsy would not continue?

In the third place, it had been found that epilepsy was apt to be relieved by any operation upon any part of the body. In fact, any strong impression upon the peripheral nerves would be likely to have this result. This being the case, we were not in a position to judge of the permanency of the cure or relief in the vast majority of cases of operation, because the subsequent histories of the patients were not given for a sufficient length of time following the operation. It was, moreover, a well-established fact that many cases of epilepsy would go spontaneously for months and years without a fit. The trouble practically ceased for these long periods. At the time when phimosis was considered of so much importance he had seen the operation for the relief of this condition do quite as much good in epilepsy as had ever been reported from trephining. In the same way, he had seen the removal of a piece of skin from the buttock have a most beneficial effect. When these things were taken into consideration, therefore, it could be seen that there was considerable room for doubt as to the real efficacy of trephining.

Many of the cases of epilepsy dated back from infancy or early childhood, when lesions were produced by parencephalitis or meningitis which it was utterly impossible to remove. In adults some cases were called idiopathic simply because no one had been able to determine what the patho-

logical changes present were. As to traumatic epilepsy, of course, if you could find a cicatrix and remove it, you might perhaps do good; but it was well to bear in mind that just as much good could be accomplished by the operation for phimosis. Even where there had been depression of bone the epileptic habit might continue after this condition was removed. In the brain we could now localize for a certain number of things, such as the extremities, speech, etc., but beyond this all was pure speculation.

In any case of epilepsy, however, it was certainly desirable to know whether the lesion was within reach or not. If the growing doctrine that cortical lesions alone give rise to epilepsy should prove correct, it would be a great point gained for the surgeon, and much might be hoped for the future. There was a certain amount of ground for this opinion, and that subcortical lesions do not produce any loss of consciousness. As he had said before, the histories of the cases of operation were, as a rule, sadly lacking in completeness. He had seen cases of idiopathic epilepsy go for ten years without a fit, and others had reported cases which had no fit for twenty years. This whole question of operation in epilepsy must, therefore, be regarded as still distinctly *sub judice*, and any advance that might be attempted must be made very carefully and slowly.

Dr. Minor said, in closing the discussion, that the indications for trephining as he had given them had been drawn, not from any special theory as to the nature of epilepsy or its forms, but simply from the records of clinical cases. By judging from clinical experience he had tried to avoid any discussion as to its nature, and he had not consulted tables of statistics (all of which were imperfect) so much as the original reports of cases, as far as he could get at them. As to the matter of a scar, trephining, of course, caused a scar, and several cases were on record where the operation itself had been the cause of a reproduction of epilepsy.

In reply to Dr. Fisher's inquiry as to whether it was justifiable to operate in cases of idiopathic epilepsy when the convulsions were general, and no scar was present, he said that he had trephined in one such case, and the patient was at all events no worse than he had been before. The place selected for the operation was over the fissure of Rolando, and he did not go below the dura mater. This was now over ten years ago. The question of cerebral pressure, due to a disparity between the skull and its con-

tents, came up, and the case was supposed to be one of too early ossification of the cranial bones. He thought that he was warranted in trying to relieve the patient by operation; but this was not followed by any result, and he was now in a lunatic asylum. After that he gave up the doctrine of cranial pressure, which certainly did not seem to hold good in the case of the flat-headed Indians, who he had never heard were especially subject to epilepsy. As to the presence of a scar being an indication for trephining, he thought that in his paper he had given about all the data that were warranted by clinical evidence.

Translations from Our Foreign Exchanges.

Translated for the MEDICAL NEWS, from the French, by Dr. Illovy,
Cincinnati, Ohio.

PATHOGENY OF GLYCOSURIA AND DIABETES.

BY D. H. ARNAND.

(Continued from December Number.)

VI. Nevertheless from the very out set, certain prominent authors combated these views; I shall only cite Pavy, Schiff, and in France Prof. Iaccond. "If," says Pavy, "sugar came into the circulation, it should, owing to its great diffusibility, pass into the urine and we should all be diabetics." Certainly the preceding proposition contains a capital error, for it has been demonstrated in an almost indisputable manner that sugar in notable quantity gets into the circulation by the sub-hepatic veins. But, at the same time, Pavy, and the other authors whom I have cited, have the merit to have perceived the incompatibility of these two facts: presence of sugar in notable quantity in the circulation and absence of glycosuria, and it is but just to recall it here. Definitively, sugar gets into the circulation, but does not remain therein; it does not exist any more, or at most only insignificant traces of it about the level of the renal circulation, and this is the reason why normally there is no clearly appreciable glycosuria.

VII. Where and how does this sugar disappear? Dr. R. Lepine (of Lyon), who has been seriously studying the question of diabetes for some time, and who has presented to the Academy of Sciences a series of interesting communications, admits the disappearance of glycose in the blood.

He has not, it seems to me, clearly expressed himself as to the precise locality where the glyco-se disappears from the circulation. If, as Bence Jone and Schaltzen, as I believe, admitted that this disappearance occurred only in the general capillaries, the absence of a physiological glycosuria can not be explained. We are therefore compelled to admit that the disappearance of the sugar is effected between the sub-hepatic veins and the renal artery.

As to the manner of its disappearance Dr. Lepine is more positive. According to him the glyco-se is veritably destroyed by fermentation—aglycolysis, to use his expression. In his last experiments made in collaboration with M. Burrel, the Lyon physiologist, he undertook to demonstrate, among other facts, the disappearance of blood superadded to sugar *in vitro*. This is one of the most interesting phenomena; it accords, moreover, with the disappearance of normal sugar of blood *in vitro*, long ago demonstrated by Cl. Bernard, and also with the experiments of extirpation or isolation of the liver in living subjects, in consequence of which Bock and Hoffmann and Minkowski have demonstrated the disappearance of the normal sugar of the blood. But neither the experiments of Lepine nor those of the physiologist just named demonstrate the *destruction* of glyco-se by *fermentation*, its *disappearances by glycolysis*. It is possible, in fact, that this disappearance may be effected by a glyco-genic regression, by a return of the glyco-se to the state of glycogen, and I believe that this is what really does occur; at least, this appears to me as the result of some experiments which I shall make known later on. I shall confine myself for the present to recalling one fact, which appears to me of especial value in the consideration of the question under discussion; and that is the presence of a notable quantity of glycogen in the blood.

VIII. At the time of the last discussion on diabetes, at the Academy of Medicine, I had in my charge some cases of this malady, and I was thus brought to take a closer view of the question so as to render more precise my notions of this disease. I was naturally disposed to adopt one or the other theories actually prevailing, but I was arrested at the outset of my studies by the difficulty of reconciling the two phenomena of which I have already spoken—normal gly-cemia and absence of glycosuria. I nevertheless forced myself to find a rational explanation for this co-existence.

It is probable, I said to myself, that on getting into the

blood the glycose does not remain in a free state, that is, simply dissolved in this liquid; it may become incorporated into the plasma, assimilated and retained by it in a sort of chemical affinity, which opposes itself efficiently to the passage of glycose through the renal filter; whence absence of normal glycosuria. It was therefore, according to my opinion, a combination of sugar with the plasma or with one of its constituent elements—the albuminoids, I suppose—which opposed itself normally to a dialysis of the glycose of the blood. But however rational, it was still a purely hypothetical explanation, and I desired, before making it known, to support it with positive proof; I wanted to demonstrate, for example, the possibility of the combination of sugar with the albuminoids of the plasma. I made some attempts in this direction, but without accomplishing anything. I therefore took a different path. Whilst engaged in this work a new idea struck me, and I asked myself whether, perchance, the sugar, when it reached the blood, instead of being destroyed on entering into combination with the albuminoids, did not rather undergo a regressive metamorphosis, and was thus transformed into glycogen and analogous carbohydrates.

After many long attempts I succeeded in extracting from the blood a sufficiently considerable quantity of a special substance which gave a red-violet reaction with iodine, and which seemed to me to possess all the essential properties of glycogen. It did not, in fact, reduce by itself the cupric reagents, but it was easily transformed into glycose by the prolonged action of diluted acids brought to a boiling temperature, and into maltose by the action of the saliva and of pancreatic juice at a temperature of 45 to 50° C. I asked myself one moment if this were not a combination of albumin and glycose, but the manifest action of the saccharifying fluids directed my mind towards the idea of a non-nitrogenous body, a veritable amylaceous substance.

I recollected a certain number of well-known facts which could be invoked in support of this opinion. At first Claude Bernard, towards the end of his career, had an inclination to admit the presence of glycogen in the blood: "Some experiments, which I have as yet not sufficiently repeated, authorize me nevertheless to think that there might be in some cases glycogenic matter circulating in feeble proportion in the body." (*Cl. Bernard l. Cit. p. 412.*) Pavy is more positive; he affirmed the constant presence of glycogen in the blood—he had, however, never isolated it—in

the proportion of 0.6 to 1000. Finally, one thing struck me strongly: that is, the situation very analogous to mine in which Claude Bernard found himself after his discovery of hepatic glycogen, which he relates in the following terms (*Cl. B. l. c. p. 301*): "I thought that this might be some new body, some glycoside analogous to amygdaline, for example. It was only after I had made many fruitless efforts to isolate this unknown material that I took another view of the matter and my efforts were crowned with success. The emulsive decoction of the liver treated with alcohol furnished me an abundant precipitate; this was the glycogenic matter. The glycogen analyzed by Pelouze gave no trace of nitrogen, and its conduct in carbon, hydrogen and oxygen is expressed by the formula of vegetable starch."

As can be seen, I followed unconsciously the same route that Cl. Bernard had taken in his investigations, and everything concurred to indicate that I had isolated the glycogen of the blood just as he had isolated the glycogen of the liver.

IX. Thus my second hypothesis seems justified, namely, the regression of the glycose derived from the blood into glycogen and analogous carbo-hydrates. The blood glycogen, in fact, does not originate directly from the glycogen of the liver, a body but little adapted to the osmotic interchanges; we know furthermore that the glycogen of the liver is transformed into sugar and in this form passes into the circulation. It is therefore this blood glycose of hepatic origin, added to the glycose returning by the vena cava from the general capillary circulation, which disappeared in the tract which separates it from the renal arteries to pass into the state of *hematic glycogen*. But no matter whether the body isolated by me is a glycogen or a glycoside, whether the sugar in the blood enters into combinations or retrogrades, it is of but little importance from the standpoint of the pathogeny of glycosuria; it suffices to say that in one or the other case the free glycose should disappear in the normal state in the tract comprised between the heart and the renal artery.

Permit me to adduce a further argument in support of this disappearance. It is furnished us by the experiments of Cl. Bernard himself. From his first researches Cl. Bernard found more glycose in the right heart than in the left; he had even concluded from this that the sugar was burnt up in the lung, which is not exact; but the abandonment of the theory does not imply a falsity in the experiments which

gave rise to it, and it remains the not less true that the blood loses sugar in the tractus of the pulmonary circulation; if this loss continues to the level of the renal arteries, it is not at all astonishing that normally *the crystallizable glucose is not found in a free state at the nivean of the renal vessels*, and that, consequently, there can be no normal glycosuria.

X. I have insisted so repeatedly upon the normal absence of sugar in the blood of the renal arteries, because this fact conduces without effort to the establishment of the general pathogenic condition of glycosuria; this condition is nothing else *than the presence of sugar in appreciable quantity in a free state in the blood of the renal circulation*. This is the sole, immediate organic cause, the necessary and sufficient cause, of glycosuria, for glycosuria, on the one hand, could not occur without the presence of sugar in the renal glands, and, on the other hand, the renal glycaemia, easily appreciable, could not occur without being followed by glycosuria.

XI. This last conclusion, which results from our examination of well-known facts, will not readily be accepted by the partisans of the doctrine of hyperglycaemia. For these it is *hyperglycaemia*, which is the general pathogenic condition of glycosuria. But it seems to me relatively easy to refute this latter doctrine.

In fact, of two things one: either there exists a normal glycaemia, or it does not exist.

In the first case, how can we account for the absence of a physiological glycosuria? If this glycosuria does not occur, it is evidently because the blood possesses the normal property within itself, to oppose the dialysis of this substance, a dialysis which would infallibly occur if the saccharine liquid in contact with the kidneys were distilled water instead of blood. However, it is possible that this property of opposing the diffusion of sugar exists, and is efficaciously exercised even when the glycaemia augments, and in that case we would have hyperglycaemia without glycosuria.

On the other hand, it may happen that, the sugar being taken up and present in the blood in normal proportion, the blood have become affected, have suffered a change which caused it to lose its property of opposing itself to the removal of the sugar, in which case we should have a glycosuria without hyperglycaemia. Therefore we can not ration-

ally see in hyperglycaemia the necessary and sufficient general pathogenic condition of glycosuria.

Let us now pass from the domain of reasoning to the more solid terrain of clinical and experimental observation; and we see that sufficiently often glycosuria without hyperglycaemia, and glycaemia without glycosuria, have been observed. Cl. Bernard (*Loc. cit.* p. 375-376) cites numerous examples of experimental hyperglycaemia without glycosuria; here is one: "We have already made the experiment on a first dog, which, although poisoned by curare, did not show any evidences of diabetes. . . . *The glycaemia was nevertheless augmented*, but not sufficient to produce glycosuria. . . . Before the experiment we noted for the arterial blood 1 grm.—70 to each 1000 of blood. . . . During the intoxication we noted for the arterial blood 2 grm.—40 to 1000 of blood." Thus a hyperglycaemia could be observed which amounted at least to 2 grm. (40 per 1000) without glycosuria. On the other hand, Seegen, of Vienna, has found cases of diabetes in which the hyperglycaemia was of very slight character or did not exist at all. "I have," says he (*Loc. cit.* p. 236-37), "on various occasions analyzed the blood of diabetics, having, however, previously established by ten examinations of blood from healthy persons that the amount of sugar on the average equals 0.17 to 1000. If we compare the results found in diabetics of light form, it is found that the quantity of sugar hardly surpasses the average figure determined by me for physiological conditions, and was inferior to the maximum amount found in the healthy man." I could cite other well-known cases of diabetes without exaggerated glycaemia; glycosuria can therefore be observed without a hyperglycaemia.

Thus, even though a normal glycaemia be admitted, hyperglycaemia would not be the general pathogenic condition of glycosuria. And for a still stronger reason would this be the case if a normal glycaemia, clearly appreciable, be not admitted; then there is no further reason for the expression hyperglycaemia—it is absolutely without meaning.

Let us not lose out of sight the acquired notions; we know that the sugar, on reaching the blood by the sub-hepatic veins, disappears in this fluid—either to be transformed into non-diffusible carbo-hydrates or to be assimilated in the blood plasma—and consequently does not exist any more in the free state when it reaches the level of the renal

circulation, to reappear again perhaps in the general capillary circulation and to assist there in the exchanges and nutritive transformations. It becomes evident, thus, that the word hyperglycaemia, employed isolatedly, has no signification for us. About the region of the kidneys there can be no question of a pathological hyperglycaemia, because about this region there is no such thing as a normal glycaemia. We could only admit a hyperglycaemia either in the blood comprised between the sub-hepatic veins and the kidneys or in the peripheral circulation; but then we should have to specify, to say of what hyperglycaemia we are speaking; and I do not refuse to admit that hyperglycaemia of the blood between the sub-hepatic veins or of the local circulation is a possible condition of glycosuria; but I hope that it will also be admitted that it is not the necessary and constant condition.

There is therefore but one definitive cause, one general pathogenic condition, of glycosuria; this condition, necessary and sufficient, which is always followed by glycosuria, without which glycosuria can not occur, nor even conceived, *is the presence of glycose, a crystalloid body, in the free state and in appreciable quantity in the blood of the renal arteries; that is, en resume, renal glycaemia.*

And this renal glycaemia is itself, from all appearances, subordinated to a *default of glycogenic regression*—absolute or relative—which the sugar undergoes on its arrival in the vena cava; moreover, that this sugar comes from the general capillary circulation or from the sub-hepatic veins. In this way the phenomenon of glycosuria leads to the supposition, on final analysis, of three separate stages, three acts; indissolubly united, absolutely inseparable, each one a necessary consequence of the other entailing or following it. These three separate acts or stages are:

- 1st. Default—absolute or relative—of regressive transformation of the sugar after its arrival in the vena cava.
- 2d. Renal glycaemia.
- 3d. Glycosuria.

As a means of increasing the excretion of uric acid, salicylate of soda has thirteen times the power of salicine; while salol occupies an intermediate place.

Hysteria and Hysterical Manifestations

BY DR. STANLEY M. WARD.

(Read at the November meeting of the Scranton Medical Club.)

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WHEN Dr. C. K. Mills prepared the article on hysteria for the fifth volume of the *System of Medicine*, edited by Dr. Pepper, he stated that there had appeared 1,232 books and articles on the subject to which reference was made in the *Index Catalogue*, but that these only represented "probably a tithe of the works written on this subject." If, therefore, my essay shall be criticised on the ground of incompleteness, the immensity of the topic and the impossibility of even a cursory glance through all the references must constitute my reply. Throughout this article, while to some extent quoting cases illustrating my remarks, my object particularly is to draw your attention to some of the rarer clinical features of hysteria witnessed to a large extent by myself during my professional career.

The hysterical manifestation occurs frequently and in a pronounced form at times of unusual excitement, regardless of what that excitement be due to. Particularly do we find marked, weird and *outré* expressions of it in the psychological history of nearly all forms of religious worship. Crowds, revivals and monastic seclusion, with low diet, tend to bring about outbreaks, and wherever sentiment and passion obscure reason and judgment, there do we find such phenomena as trance, epileptoid seizures, catalepsy, demoniacal possession, visions and wonders, great and small, with such abnormal exaltation or depression of the nervous centers as to warrant us in denominating these as symptomatic of a disease called, in lieu of a better name, hysteria. Practically, there is no difference between the dancing women, fasting girls and mewing nuns of the middle ages and the spasmodic writhings and fantastic contortions of those who to-day "get the power" at an old-fashioned camp-meeting or at the Salvation Army. Though in no way connected with any religious observance, so far as I can learn, the strange antics of the "Jumpers of Maine," as detailed by the late Dr. Geo. M. Beard, and also the victims of a disease in Russia, called by Hammond *mirychit*, may be appropriately mentioned here. Dr. Beard relates that while studying the "jumpers,"

certain phenomena such as the following were observed: A man sitting quietly cutting some tobacco was told to "throw it" in a tone of command. He immediately threw the knife, ejaculating "Throw it." Two of them, while standing close to each other, were told to "strike." Immediately each struck the other a sharp blow, and repeated the command to strike. A cook on board a vessel, while holding a plate of beans, was told to "drop it," which he immediately did, saying as he did so, "Drop it." Dr. Beard noticed that while the victims always did as told, yet there was usually an evident resistance, as they always turned pale and their repetition of the commands was uttered in a voice indicating pain. These people, according to the same observer, though not bright mentally, were far from being imbeciles.

It is the writer's opinion that all the phenomena thus far alluded to indicate hysteric possession and differ only in degree from those pseudo-epileptic attacks and accompanying peculiar features so often seen in nervous, susceptible females, which nearly all the world, professional and lay, unite in denominating hysterical. But all these exhibitions, whether of hysteria or some other disease, are marked. The most casual observer would acknowledge that something out of the ordinary was taking place—they are fulminant and active—he who runs may read; but as throughout nature mimicry in both animals and vegetables is so often observed, sometimes perfect, sometimes not, so with the animal, man, a mimicry of disease is often found. Now, the mimicry with which naturalists are acquainted is for the most part self-protective, and it is among the possibilities that hysterical patients, often, all unconsciously it may be, from motives akin to those which influence many birds and insects to select a habitat similar in color to their own bodies, develop symptoms of rare and obscure diseases. Who shall say that originally, at least, such was not the case, and that from motives of self-interest, if not of safety, the *hysterique* became a mimic? This peculiar nervous organization, fixed to a certain extent by hereditary descent, may have been bequeathed to the posterity, so that the latter, if not really hysterical to begin with, become easily moved by many forces, among them such as we have mentioned in the early part of this paper. Indeed, Sir James Paget proposes as a name for hysteria, neuro-mimesis. This is probably more nearly correct, as nearly every one acknowledges the etymology of hysteria as referring to the womb to be founded in error. Yet in the

present state of medical science it is hardly time to drop words or phrases sanctioned by time and usage. We shall do well, however, to keep ever in mind the words of Chambers, "It is no more correct to say that women are hysterical because they have wombs, than it is to say that men are gouty because they have beards."

We shall be safe in saying that hysteria, properly speaking, has no pathology. This being the case, its cause is unknown, and strictly speaking we are as far from knowing much about it, save in its clinical aspect, as were those who long ago attributed it to the "7,405,926 devils of hell" (Richet). The absence of morbid lesions and the great diversity of symptoms frequently causes diagnostic confusion, and what one observer may call hysteria another may call nervous depression, neurasthenia, or by some other equally unsatisfactory name. I believe any symptom or set of symptoms which, continuing for many months, fails to either destroy the organism or to affect other parts of it, either directly or indirectly, which therapeutical and hygienic measures, ordinarily successful, totally fail to even so much as relieve, and which finally yield to measures appealing solely to the patient's imagination, to be hysterical. I am aware that this definition, like so many others, leaves much to be desired on the score of correctness. Nearly every disease in the nosography may be simulated by hysteria. From tabes to phthisis, from gastric ulcer to ingrowing toenail, nay, even Hodgkins' disease and exophthalmic goitre, may seem to exist in patients whose only disease is a diseased imagination. We may have hysterical blood-spitting, hysterical sweating, yawning, and hysterical pain from head to heel; we may have hysterical breasts, hysterical paralysis, aphonia and hyperæsthesia; fever, too, may be hysterical, an exceedingly high temperature from this cause having been noted. But it is among the joints, as Sir Benj. Brodie tells us, that "hysteria loves to dwell." He states that the great majority of the upper classes of England who are supposed to suffer with joint disease suffer from hysteria, and nothing else; and Skey, who quotes him to this effect, says that he would venture to include most of the lower classes as well. The following case illustrates this point. It was related to me by a practitioner with whom I was associated some years in practice. Quite early in his professional career he was called to attend a young miss of about thirteen for inability to walk. This condition had developed

suddenly, as she had gone to bed the night before in full possession of her locomotory powers. In the morning she couldn't get out of bed without suffering great agony. At least, she said so. Examination showed no depression of the buttocks, no pain significant of disease in the head of the femur or in the acetabulum; in fact, no pain at all was complained of unless the leg, which was flexed on the thigh, was extended. The doctor suspected the nature of the case, but the mother was so indignant when he broached the subject that he kept further thoughts to himself. Finally, after several weeks of placebos, blisters, etc., he declined further treatment unless his wishes were complied with. The mother assented, and the doctor started a small fire in a coal-scuttle downstairs; the smoke ascended to the girl's room, while the cry of "Fire" was lustily raised. In an incredibly short time the bed-ridden (?) girl appeared below stairs, scantily attired, but in evident possession of all her limbs. She bethought herself of her lameness in a few minutes, but too late; her mother commanded her to return and dress, and to let her hear no more of the "hip-joint" trouble. Such cases are more or less common, and you are referred to a work by Dr. V. P. Gibney for further ones. The following case, occurring in my own practice, illustrates a somewhat rare form of hysteria. G. B., a young lady, blonde, aged about sixteen, lived six miles from my office. Family history unimportant except that an older sister suffered from severe dysmenorrhea. She had been subject to epistaxis for some years and had also a peculiar habit of at times regurgitating her food. This ejection of food neither annoyed nor inconvenienced her so far as I could learn. Often she would return to the table after emptying her stomach, and eat another meal. I was called to see her for diarrhœa one day, and elicited a history of a fall which had occurred some months before, but from which she supposed she had entirely recovered. While running across the school-yard at the time in question, she had fallen and struck her left side against a stump in the region of the lower ribs. She was picked up in a faint and was unable to leave the house for several days. Shortly afterward a "lump" appeared over the site of the injury and she limped while walking. This lump appeared and disappeared. Just then she said it was not present, and she refused an examination of her side. I prescribed for the diarrhœal trouble, and in a few days she was around the house. At my last visit she was limping,

favoring the left leg. Inadvertently, I inquired about the "lump"—which was now present, though I was not allowed to examine it—and asked her if she had ever spat or raised blood, receiving a negative reply. Late in the afternoon of the following day I was hastily summoned with the message that she was vomiting blood. I arrived at the house about midnight. On inquiry discovered that G. had not felt at all well after my visit and had gone to bed soon after noon; had arisen late the next morning, and about noon, going to her room, had felt something saltish in her mouth, and, spitting it out, found it was blood. She had spit out quite a quantity since, and claimed to be so weak and exhausted, though in good spirits, as to be unable to speak above a whisper or to sit up in bed for more than a few seconds. Examination of the nares, anterior and posterior, of the pharynx, teeth, gums and lungs, convinced me that neither was the source of the blood, and that she was not shamming. Though some points in the diagnosis of gastric ulcer were wanting, I so called her complaint and treated her for that condition for several days. I could discover no tumefaction on her side. She continued to spit blood, not vomit it, for nearly forty-eight hours. How much, is simply conjecture. Her condition was then as follows: Somewhat pale, with erythemic spots on her cheeks; temperature 98°, pulse 130, feeble, respiration 30, slight delirium at times, abdomen slightly tympanitic, sleeps but little and complains of nothing except of feeling "deathly sick" at times. After sleeping quietly for a few hours, she began vomiting, with severe exertion, a greenish liquid. Her stomach was intolerant of everything, and her rectum, having been used quite often as a means of feeding her, now also became intolerant, and a furious diarrhoea set in, the stools containing blood, being tarry and exceedingly offensive. Finally the vomiting ceased, as did also the diarrhoea; she asked me to sit with her awhile, which I did. She now became quite communicative, talked freely about her affairs, and acted quite unlike a patient who for nearly a week had been at death's door, as we all supposed she was. I found out during this *tete-a-tete* that my lady had a lively imagination, in fact, vulgarly speaking, she lied. Some days afterwards blood oozed, or seemed to, from her eyelids, and she developed other symptoms of hysteria. I began to suspect an error in diagnosis, and was more than confirmed in this view by the effect of a change in the medication. Instead of the Fowler's Solution, nitrate of silver, bismuth,

etc., etc., she had been receiving, recourse was had to morphia and atropia in small doses, with decided stimulation, and in a few days my patient was out of bed, looking as well and healthful as ever. I saw her several times during that year with bleeding attacks and also for hemi-paralysis of the tongue, numbness and formication, aphonia and other symptoms of hysteria. The management of the case now was entirely different from that in the beginning, and consisted of morphia, asafoetida, valerian and alcoholic stimulants. This case was, as may be guessed, at first a great puzzle to me. My treatment for a gastric affection was a decided failure, while remedies affecting the nervous system always resulted in good. In looking over the literature at my command I found little to enlighten me. In fact, the case reported by Dr. Watson, *Practice of Physic*, where a girl vomited "potsfull of blood," without apparent cause or effect, was the only reference I found which went to show that an hysterical patient might have hæmatemesis, or something akin to it, in her *repertoire*. Later on a quotation from Ollivier came to hand wherein he describes an "hysterical phthisis." Patients, young girls mostly, spit blood, cough some, have an increase in temperature and other signs of pulmonary involvement, without any lesion of the lungs, and the cases never develop phthisis. Dr. Mills, also, in his article herein before referred to, mentions blood spitting among the symptoms sometimes developed by *hysteriques*.

An hysterical patient often presents many phenomena not to any extent apparently related. Take the case already becoming classical, reported some time ago by Drs. Cohen and Harlan, of Philadelphia. This patient, a woman, was treated by Dr. Cohen in September, 1884, for "sore throat." There were difficulty in swallowing and slight regurgitation of food as symptoms; she had also some weakness of vision in the right eye; later her voice became husky and finally aphonic. She recovered her voice, and an attack of what was said to be pleuro-pneumonia ensued. During this attack she became paralyzed. Before the disappearance of these symptoms, twitching of the face and torticollis appeared; presently fixed dilatation of the pupil, with diplopia and blepharospasm, came on, and finally blindness of the right eye. A permanent recovery took place and she was lost sight of for some time. She then applied to the surgical department of the Polyclinic for relief for a stiffened elbow, said to have been dislocated by a fall. This symptom was also

proven to be hysterical, as the spasm relaxed and the arm grew better under the use of a wooden magnet tipped with iron. She had, however, not finished with her "Iliad of woes," and Dr. Cohen was hastily summoned one night to see her in a fit of hysterical dyspnœa. She expectorated copiously and had rapid respiration. From this apparently severe attack she recovered promptly under proper treatment (a treatment directed solely to her imagination).

Intestinal colic is sometimes stimulated by hysteria. These cases seem to suffer, perhaps do suffer, excruciating agony, greater pain being often complained of than seems warranted by the condition of the patient. Says Dr. Watson in his *Practice of Physic*: "The worst cases of abdominal colic I have ever seen have been those due to hysteria." My somewhat limited experience corroborates his opinion. Frequently have I administered full doses of opiates to these cases with no effect whatever, so far as relieving pain was concerned. Indeed, with most *hysteriques* opium is poorly borne, and fails to benefit. Symptoms pointing to *angina pectoris* sometimes occur in such patients as we are considering. The following is a case in point. Miss C., aged about forty-five, is an epileptic. Frequently after her seizures she suffers from headache and malaise, for which she has sent for me. On such an occasion I was hastily summoned to relieve an intense pain in the region of the heart. She complained of a severe, stabbing pain all over the cardiac region. Physical signs and other symptoms negative. Treatment by anodynes, heat, rest in bed, etc., failed to do anything more than momentarily ease the pain. I also applied a "fly blister." On the occasion of my second visit she yelled and screamed so alarmingly that I resorted to chloroform and anæsthetized her to the surgical degree. As the effect wore off she commenced screaming again and seemed as bad as ever. Counsel seemed quite sure that we had a case of *angina pectoris*, but agreed to try an enema of tr. asafœtida and milk before resorting to the nitrites. Accordingly she was given two ounces of tincture asafœtida in a pint of milk, and before we had finished she shouted "I'm cured," and so she was so far as the pain was concerned. I have had occasion several times since of demonstrating that in such cases of "angina pectoris" asafœtida is a sovereign cure.

Of hysteria in the male I have seen but a few cases. I remember particularly the case of a boy who had many of the symptoms of an acute inflammatory rheumatism without

any rise in temperature, a fact which, coupled with several others of a domestic nature, led me to treat him with a mixture in which it would be difficult to find any particular virtue, with results astonishing and most satisfactory. The convulsions of hysteria form what may be called its classical symptoms. Doubtless every member of this club has witnessed many cases. The cases of hystero-epilepsy, so thoroughly studied by Charcot, need not detain us long. The cases I have seen, with one exception, have not followed minutely his description. I have had one case, who, having been hysterical for a number of years, and exhibiting the usual phenomena, convulsions, finally became a fine example of the *hystero-epileptique*.

Cases of what I am tempted to call "traumatic hysteria," not much treated of by authors, so far as my reading goes, have been somewhat frequent in my experience. I mean by this term to include a class of cases which, after an injury, for the most part, far from dangerous, often very trivial, exhibit symptoms which no one with any experience at all would mistake for anything but hysteria. The case of blood-spitting herein related was, I believe, a case of this kind, though this was not so easily diagnosed, and I have seen others. Pain in the left side, constant and dull, in the vicinity of the spleen, with tumefaction, conveniently disappearing when the patient is examined, together with convulsions and other neurotic phenomena, are the principal features. To come under this heading, patients must have been free from outbreaks prior to the injury. A long legal fight, in which I was a witness, caused me to become familiar with one case whose history is as follows: L. B., a young lady aged about sixteen, with good parentage and perfect freedom from either physical or mental cares, well developed and healthy, fell on the pavement one evening while going to a meeting of the Salvation Army. She arose hurriedly and laughed over her mishap with her escort, saying she was not hurt at all. She then entered the room where the meeting of the army was going on. In about a half-hour she complained of faintness and was assisted to a neighboring drug-store, distant a square and a half. She walked without difficulty. In the drug-store she drank an ounce or so of wine and sat down. Shortly she had a spasm, and was removed to a neighboring physician's residence. There for forty-eight hours she remained, and, as far as I could learn, had convulsion after

convulsion during the whole time, complaining of pain in her side over the site of injury. She was removed to her father's house, distant nearly two miles, and I was called as counsel two weeks afterward. Soon after my arrival, having questioned her but little, she set at rest any doubts I may have had by an exhibition of a typical hysterical convulsion. This patient was studied by a number of physicians and lawyers, but never recovered any damages from the owner of the premises on which she fell, if my recollection is correct. Inasmuch as she finally occupied some position in a foundling asylum, I presume time, often an excellent physician in both physical and mental diseases, cured her.

I have given you in my own way and manner some of my ideas on hysteria; and have endeavored to bring before you some of its more uncommon manifestations. I have not aimed at originality, and my desire has been particularly to draw your attention to the indisputable fact that very often a disease which has baffled both in diagnosis and treatment, many able men will yield without a struggle to Christian Science (?), faith cure, homeopathy and other 'pathies and 'isms, for the very good reason that no disease, strictly speaking, existed. It behooves us all to be on the lookout for the manifold and multitudinous manifestations of this hydra. *Diagnosis*.—Not always easy. Difficult enough when uncomplicated, doubly so when there is added to a real disease, hysterical symptoms. The separation of the two is often impossible. To say just which symptoms are an outcome of the disease and which are present because of a diseased intellection is a matter, though important, not infrequently nearly impossible. Here, as elsewhere, a therapeutic test has served me better than anything else. Symptoms, which appear violent, severe and dangerous even to life, which quickly yield to asafœtida, valerian or bread pills under some fanciful name, as "pil. dynamite," or "pulv. electrocutis," etc., or to wooden magnets, can not, of a necessity, have much of a basis. Nevertheless, careful and cautious as we may be, we shall be fooled time and again, our so-called "instruments of precision" will all fail us, and we all shall probably, at some time in our professional career, find that some hysterical patient has led us a pretty chase all through the fields of pathological and physiological lore, to finally disappear into the gulf of homeopathy for a time, to emerge, like the

monsters of the fairy tales, as a beauteous maiden, clothed with the finest habiliments, a living monument to the great skill (?) of the disciple of Hahnemann. So far as the more common exhibitions of hysteria go—*i. e.*, the convulsions, etc.—a little waiting will usually show us that they are caused neither by strychnia nor epilepsy, while the history will negative these, and also hydrophobia. Then, too, the great anxiety to appear well, so far as hair, clothing, etc., are concerned, with the great reluctance to being touched in any way or examined, will, in the great majority of cases, throw much light on a given case. It is comparatively easy to differentiate these convulsions from others unless they occur during pregnancy, when the condition of the woman may momentarily deceive us, but even here the history, the suddenness of the attack and other symptoms, or lack of them, will, in a short time, bring us to the truth. When hysterical symptoms occur during an illness, we can but use our judgment; but better err on the side of our patient than to diagnose “hysterics,” and find in a short time that our patient has gone over “to the majority” with cerebral tumor, etc., as has happened to one observer that I know of. Treatment.—In those cases who have periods of intermissions, the treatment, of course, divides itself into that of the attack, and that of the intervening period. Convulsions are usually best treated by an emetic on the start. I think it is Goodell who says that when a patient vomits she usually can't do anything else. After this, I administer a mixture *malignans*, tr. *asafoetida*, fl. ext. *valerian*, aa. one ounce with the bromide of potassium a half ounce. Of this, a teaspoonful is administered at each attack, and I have found that a few doses of this will most effectually settle an ordinary hysteric convulsion. Electricity, metallo-therapy, massage, etc., all have their place in the treatment of those contractions and paralytic attacks which constitute the *bete noir* of most physicians. Hypnotic suggestion, too, has its advantages, and, where applicable, is a most potent agent for good. Above all, the confidence of the patient must be secured, and it is a *sine qua non* of all the treatment of hysteria. If it is deemed necessary to use threats of hot irons, cold douching and such agents, they must be made with the intention of carrying them out if necessary. I once brought an hysterical young lady to her senses by threatening to bleed her, and in another case the sight of a catheter, with the threat that it would be used,

stopped convulsions where a pail of cold water, applied vigorously, had failed. During the intermission—*i. e.*, while the patient considers herself “comparatively well”—fresh air, suitable bracing food, cold sea-bathing, the best moral and mental surroundings, are all of importance and are far superior to drug medication. I have used Goodell’s Co. sumbul pill with good results in a few cases. Weir Mitchell’s rest treatment has cured patients that no other system of therapeutics or hygiene has even touched. However, all treatment is too often unsatisfactory, if by a “cure” is meant such a thorough reorganization of the make-up of the individual as to totally and forever rout the demons with which these patients appear affected. As some one has said, when the hysterical patient says she “can not,” it looks like “I will not”; it is in reality “I can not will.” In past ages hysterical patients were supposed to be possessed with evil spirits, and were frequently burned or hung; to-day, we endeavor to exorcise these devils by more potent means than holy water and prayer; but until the education of both sexes is carried on differently than it is now; until it loses what I can call nothing but sensational character; until a rational and scientific turn is given to the process of mental, moral and physical training, and there is at least as much attention given to the production and development of a child as to horse, sheep or an ox; in a word, until those principles which physiologists and humanitarians all the world over recognize as correct, true and peculiarly applicable to the human race, are used as a basis on which to work out the salvation of the generations yet to be—we shall go on producing a race of neurotics, which physic, for the most part, has no power to cure.

SCRANTON, PA., 417 Adams Ave.

Selections.

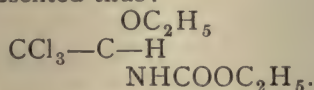
Notes Upon Somnal, the New Hypnotic.

BY FRANK WOODBURY, A.M., M.D.,

Fellow of the College of Physicians of Philadelphia; Hon. Professor of Clinical Medicine in the Medico-Chirurgical College, etc.

Last fall Radlauer, of Berlin, brought to the notice of the medical profession a new compound to which he gave the

name of Somnal, in acknowledgment of the remarkable hypnotic properties which it appeared to possess. It was formed by the union of chloral, alcohol and urethane, according to the original notice, but is not a simple mixture of these bodies. It differs from chloral-urethane by the addition of C_2H_4 , its formula being $C_7H_{12}Cl_3O_3N$. The method of manufacture is by direct combination of chloral alcoholate and urethane in a vacuum apparatus, according to its discoverer, who states that its composition might be graphically represented thus:



Specimens of this new hypnotic having, through the courtesy of Messrs. Eisner & Mendelson Co., been placed in my hands for examination and trial, I will here very briefly communicate some of the results thus far obtained, reserving my final judgment upon the drug until experience has been more extended.

Physical Characters.—Somnal is a colorless liquid, resembling chloroform in its appearance and behavior when added to cold water, in which it forms globules and refuses to mix or dissolve. When shaken with water, the mixture is milky, but quickly separates. It is soluble in hot water and alcoholic solutions, and dissolves resinous substances and fats. The odor is faint, not very penetrating or disagreeable, and resembles that of the spirits of nitrous ether, or recrystallized chloral. The taste is very pungent; and for administration it needs free dilution. It may be given with whisky or solution of tincture of zingiber or syrup of licorice. Somnal is inflammable, burning with an alcoholic flame; it does not evaporate quickly, and leaves a greasy stain upon blotting paper. Specific gravity greater than water; reddens litmus paper slightly.

Physiological Effects.—In its action it resembles chloral in quickness of effect and naturalness of the sleep produced. No marked depressing influence was exerted upon the pulse or respiration rate, though it was noticed that the breathing became slower and the pulse slower and fuller as in natural repose. No disagreeable after-effects. The head was clear and the stomach was unaffected; the patients generally had an appetite for breakfast. No constipating effect. The kidneys acted rather more freely than usual. My colleague,

Dr. Ernest Laplace, to whom I gave some of the drug for trial at the Philadelphia Hospital, writes as follows :

“I have given somnal a fair trial upon six patients at the Philadelphia Hospital. In no case were the patients told what was given them, so, outside of the bare possibility of the patients' falling asleep through natural causes, somnolence was brought on by the drug. It was administered in a solution of tinct. zingiberis, in half-teaspoonful doses, and was found palatable.

“Administered at 4 P. M., at a moment when patients were not generally asleep, in four cases sleep came on within half an hour, which lasted from five to eight hours; the two other cases showed no effect from the drug. It is their habit to get at least gr. $\frac{1}{4}$ of morphine sulph. to put them asleep every night, as they are sufferers from intractable malignant growth.

“In no case was there any noticeable after-effect.

“I have not formed any opinion upon the length of time that the drug could be used daily upon the same patient.

“To this I might add that no depression of the normal temperature was noticed in any case in my hands, and thus far I have not used it in pyrexia.”

Therapeutic Application.—The effects of somnal in producing natural sleep suggested its use in insomnia. The first case in which I used it was a patient suffering with acute alcoholism, who had been under treatment for a fortnight in an institution where he had a free supply of liquor, and he came out rather worse than he went in. He was 39 years of age, very tremulous, and could not sleep, or if he dozed off would immediately wake up. I gave him, at about 3 P. M., thirty minims of somnal (or rather a drachm of a mixture of equal parts of somnal and whisky), well diluted, and went into an adjoining room to speak to an attendant. Upon my return I was surprised to find him fast asleep, although I had not been away from him more than fifteen minutes. He slept for four hours, and then was able to take something to eat. At ten o'clock he had another dose and he slept until seven the next morning, having waked up once only during the night and insisted upon having another dose, and immediately after taking it he fell asleep again. The next night he was given a double dose at 10 P. M., and he slept all night without waking. No bad effects were observed. The somnal was given for four nights, when he was so nearly well that it was suspended,

as he had had good natural sleep at night and seemed quite restored. Alcohol was positively prohibited, the only substitute allowed being Elixir of Coca and Camellia (P. D. & Co.), in tablespoonful doses, in which it is true there was a small amount of alcohol, which was quite infinitesimal when compared with what he had been using. Somnal, therefore, acts well as a hypnotic in acute alcoholism as a tranquilizer and hypnotic.

In a case of neuralgia of the bowels (visceral neurosis of Allbutt), where the patient had a sleepless night, a dose of twenty minims relieved nausea and pain, and the patient fell asleep.

In syphilitic headache and insomnia, somnal in moderate doses failed to produce sleep, which was afterwards secured by potassium bromide and iodide, and antipyrine.

In cases of insomnia, fretfulness and restlessness in young children, somnal with mint water and syrup offers better results than opiates, and is much safer. The same remark probably applies to the use of somnal in acute pneumonia, but I have not been able to confirm this yet by actual trial.

Without further going into detail it may be stated in conclusion that somnal acts as a hypnotic, but, instead of depressing the system as chloral does, it slightly stimulates the gastric mucous membrane, relieves nausea and pain, improves the appetite, increases secretion (probably), does not cause constipation. The circulation, respiration and temperature are not notably depressed after its administration. No disagreeable after-effects have been observed. As it is rapidly eliminated from the body it may be administered each night for a number of days without any obvious ill-effects. It acts very much like chloral, but is more pleasant to take and not so depressing in its effects upon the nervous system and the circulation.—*Dietetic Gazette.*

Some Notes Bearing on the Administration of Iron.

BY JOHN AULDE, M.D., PHILADELPHIA, PA.

ALTHOUGH iron is highly esteemed as a medicament, and is largely used for its tonic effect upon the system, so frequently does it occur that the patient objects, owing to some idiosyncrasy or fancy, that we can not regard it wholly as an ideal hæmatinic. No apology, therefore, is required

in offering to the profession a comparatively recent preparation, which is free from some of the objections that have been urged against many of the iron preparations now in use. In order to make the reasons which I have to offer clear and distinct to the casual reader, I have deemed it wise to consider briefly some points intimately connected with the pharmacology of the drug. From this preliminary study we shall be in a measure prepared to estimate how nearly the new product comes to meeting the defects with which we have had to contend so long, and at the same time it may possibly lead to a more intelligent use of this well-known remedy.

Besides the reduced iron, we have in general use the ferric and ferrous preparations, the latter being more mild, less astringent, and free from the objections to the ferric salts—that of coagulating albumen. Lethal doses of the ferric salts used intravenously, in experimental investigations, cause almost immediate paralysis of the central nervous system, fall of blood-pressure, and death. Although the perchloride, when thus used, causes instant death by coagulation of the blood, it does not act in this direct manner when introduced subcutaneously; the nerves are unaffected, but at the points of elimination inflammatory action is set up; *e. g.*, the kidneys, liver, and intestinal mucous membrane show more or less effect.

Absorption takes place as a peptonate or albuminate, but it is taken up so slowly that no appreciable result follows, unless, as just stated, it may be used intravenously or subcutaneously. Absorption takes place more rapidly in catarrhal conditions of the intestinal tract—a fact to be borne in mind when exhibiting large doses, which cause gastro-intestinal catarrh. Small doses do not have this effect, nor does the metal appear in the urine from their administration, such as may be observed after the ingestion of large doses. It will be inferred from the foregoing that by the exhibition of small doses of a soluble preparation of iron it will be assimilated without causing derangement of the alimentary tract, and in this way the secondary effects, *i. e.*, the deposit of the metal in the system, may be avoided.

The fact should be kept constantly in view, that metals have a poisonous action upon nerves, nerve-centers, muscles, and upon all glandular structures; and as iron is a reputed hæmatinic, much harm may result from its injudicious employment, as there are evidentially certain toxic effects

following the long-continued use of insoluble preparations. This is a rule which applies especially to all insoluble iron preparations, and it is but reasonable to assume that whatever harm has been done through this means may have escaped attention, because few physicians are likely to investigate the presence of factitious diseases. Another factor which has contributed to lessen these evils, is the slow process of absorption.

The foregoing observations apply with equal force to the effects of the drug upon the circulatory apparatus. While copper is an active agent in causing contraction of the blood-vessels, iron produces slow contractions, showing that it is less irritant (stimulant) to the nervous system. This may possibly be accounted for on the hypothesis that iron is a normal constituent of the blood. Whether this effect is due to irritation (stimulation) of the vaso-motor nerves, central or peripheral, or to a direct action upon the muscular walls of the blood-vessels, is a question still in doubt. My own impression is, that through the influence of the medicament upon the nerve-cells the large doses, comparatively, arrest their function, when contraction of the muscular structures in the vessels takes place. The ferric salts, owing to their property of coagulating albumin and blood, of course produce more marked effects than the ferrous salts. Digitalis and ergot among the organic, and barium chloride among the inorganic, remedies, well known as vascular tonics, furnish apt illustrations of this important principle.

Iron has a tendency to accumulate in the liver; small doses do not show this tendency, but they may serve to increase the functional activity of this organ, when given in a soluble, non-astringent form, by restoring cell-nutrition to the normal.

The effect of iron upon muscular structure has long been known to experimental physiologists, but I doubt if this knowledge is appreciated by many practitioners, who regard the possible benefits to be derived from the exhibition of iron preparations in proportion to the amount tolerated by the patient. Now, large doses, while they do not affect the irritability of muscular structure, lessen materially the amount of work it is capable of performing, while small doses increase the capacity of muscle for work. What is most to be desired, therefore, is a preparation not open to the objections inferred from these investigations; but owing to the necessity for consulting the palate of our patients, it

is also desirable that the substance should be free from the nauseating effects which are so common to all preparations of iron. The combination, I believe, is to be found in that form known as levulose ferride, which was highly recommended to me several years ago by my friend, Dr. James Collins, of this city.

The preparation known as levulose ferride is one which takes the place of a well-known and popular German product, called *Eisenzucker* (iron sugar), very extensively used in domestic practice. I was led to the employment of iron-sugar on account of its palatability, fastidious patients and children making no objections to it; but this has been supplanted by levulose ferride, which in the form of tablet triturates will be taken as readily as chocolate bonbons. It is readily soluble in an excess of water, and practically free from any ferruginous taste or styptic effect when dissolved in the mouth, and is substantially a peptonate. The method of preparing it is briefly as follows: To a certain amount of iron a measured quantity of malt sugar (maltose) is added, and the mixture constantly stirred while exposed on a water-bath. While it possesses all the desirable qualities mentioned, the presence of metallic iron may be determined by chemical analysis, the strength of the product being about three per cent.

This preparation, it will be apparent, will act much less actively as an astringent than even the ferrous preparations; but, of course, it can not be expected to take the place of the ferric products, which are sometimes demanded, as in the case of intestinal parasites (*sarcina ventriculi* and *lumbricoides*). On the other hand, it will be especially indicated for the relief of anæmia and chlorosis, owing to its ready absorption, lack of astringency, and its palatability. In all cases of defective nutrition, from any cause, where the ingestion of any form of medicament is a trial to the patient, this product will be kindly received. A synopsis of some of the cases in which it is indicated, together with a summary of the effects following its employment, may prove interesting to the physician. During the early summer months, I had under observation a young mother with a six-months-old child, who presented a very anæmic condition. I had seen her but once since the delivery of her child, and anticipating that she would not be able to nourish it sufficiently and maintain her health, I had cautioned her in regard to the most appropriate diet. Notwithstanding every care

had been used, she was finally compelled to seek medical aid, or go to bed. All that this patient required was something for the purpose of increasing the amount of hæmoglobin, which would restore the integrity of the red corpuscles and improve the oxygen-carrying capacity of the blood. This being most readily accomplished by levulose ferride, she was ordered to take tablets of this preparation, each containing three grains, after meals. To meet the emergency, and increase the patient's health until such time as the advantages of the iron would be apparent, small doses of strychnine (one-sixtieth grain) were administered along with the iron. Ordinarily this class of patients, when they begin in the early summer, suffer more or less from the effects of the heat, and become regular patrons of the doctor; but this patient did not make her appearance again for about two months, when she said she thought it was about time to have a little more of the same medicine. I may mention in passing, that the first medicine was sufficient only to cover the first ten days, and the patient seemed greatly disappointed that she was compelled to return.

So many children are so promptly benefited by the use of a small quantity of iron, that it is a great drawback to us that no palatable preparation has been discovered and put on the market. I have in mind a little fellow, who has long been very much adverse to eating meat, due, I presume, to defective digestion; but for the past few weeks, since he has been taken the levulose ferride, he seems quite content to eat meat alone, and is becoming strong and robust. Not long ago I had a visit from a lady, who brought with her a young lad, aged fourteen, who had a most forbidding cadaveric expression, and he could eat no meat. His brother, I was told, had died at about this age from Bright's disease, and this one presented all the symptoms peculiar to the brother who died. Still, with attention to diet, outdoor exercise in the country, and a tablet triturate containing three grains of levulose ferride after meals, he made a prompt recovery. Although I was unable to discover any symptoms of Bright's in this instance, I was impressed with the depression due to the anæmic condition; and yet, without some readily assimilable iron preparation, it would have been a tedious process to start him on the way toward recovery.

Late in the spring of the year, a gentleman, aged about thirty-five, called on me, complaining of dyspepsia, although

he had been under the treatment of another physician for overwork for the preceding four years. After regulating his diet, and adopting treatment calculated to restore the activity of the digestive apparatus, he was placed upon levulose ferride along with strychnine sulphate—three grains of the former in tablet form, and one-sixtieth grain of the latter, and did remarkably well on this combination. This product, like all other mild preparations of iron, is mostly indicated in cases of this class, and along with these may be mentioned cholera, convalescence from lingering diseases, like typhoid fever; and in all such instances, I venture to anticipate that the results will be especially favorable where proper attention is given to dietetic measures.

The administration of the remedy may be confined to the use of the powder, which is taken dry on the tongue, dissolved in water or coffee; or it will be found more convenient in the form of tablets, each containing three or five grains. The dose for children ranges from three to ten grains, and for adults from five to thirty grains.

The Levulose Ferride was obtained through Messrs. Eisner & Mendelson Co., of New York, who import this article.

The Tenth International Medical Congress.

THIS year has witnessed the greatest of the triennial International Medical Congresses which have now been established for a generation. It met in Berlin in the month of August, under the genial presidency of Professor R. Virchow, one of the foremost living representatives of scientific medicine, whose reputation and interests singularly fitted him to occupy such a position. That the gathering was a success, socially and scientifically, is admitted on all hands. Nothing could surpass the unlimited hospitality showered upon their guests by the German people of all ranks, and especially by the Berlin municipality and the medical profession, whilst the large number of associates strained to the utmost the organizing capacity of a community by no means unskilled in the management of great assemblies. The addresses delivered at the general meetings reflected the cosmopolitan character of the Congress. Professor Virchow struck the true key-note in his opening speech of welcome by claiming for science the true link that binds nations, however severed from one another politically. Dr. Robert

Koch, in his address on Bacteriology, stimulated legitimate curiosity by his declaration that he had at length discovered a means of preventing tuberculosis in the living body—a discovery which has since been more widely made known. Sir Joseph Lister claimed for the phagocyte theory that it rendered more stable the basis on which antiseptic surgery is founded. Dr. Wood, of Philadelphia, expounded the relative merits and demerits of chloroform and ether in his address on Anæsthesia, and emphasized the greater risks entailed by the use of the first-named. Professor Bouchard, of Paris, and Dr. Axel Key, of Stockholm, were also selected to address the general meetings, the former on Infection and Immunity, the latter on the Development of Puberty and its Relation to Morbid Phenomena among the Young. The sectional meetings, in spite of certain drawbacks due to the selection of the places in which they were held, were well attended, and in most of them discussions of much interest and importance took place. In that of Anatomy, Sir W. Turner opened a discussion upon the Convolutions of the Brain; and one also took place on Histogenesis of Nerve-elements, by Professor His, in which Professors Schafer, of London, and Kolliker took part. The subject of Anatomical Nomenclature also received attention. Many communications and demonstrations were made in the section of Physiology, including papers on Muscular Contraction and Thermogenesis, by Dr. Chauveau, of Paris; on Fever and Urea Production, by Drs. Wood and Marshall, of Philadelphia; on Cortical Faradisation, by Professor Schafer and Dr. Mott; on the Motor Nerve-supply of the Larynx, by Professor V. Horsley and Dr. Semon. In the section of Medicine, a discussion on the treatment of Bright's Disease was sustained by such eminent authorities as Professor Lépine, Professor Grainger Stewart, Professor Rosenstein, Professor Senator, and Dr. Aufrecht; one, on the Treatment of Tuberculosis, by Dr. H. Weber, Professor Leyden, and Dr. Dettweiler; on the Treatment of Diabetes, by Drs. Pavy, Dujardin-Beaumetz, Seegen and Lépine; and one on Myxœdema, introduced by Dr. W. M. Ord. In Surgery, the Treatment of Tubercular Peritonitis (opened by Dr. Koenig), of Intussusception (by Mr. J. Hutchinson), a paper by Professor Billroth on Resection of Stomach and Intestine, and a demonstration of Aseptic Surgery, by Professor von Bergmann, were the leading features. The subjects of leucocytes and tissue-formation,

of myocardial lesions, and of tuberculosis, were the topics selected for general debate in the Pathological Section. In the section of Midwifery and Gynæcology the Electrolytic Treatment of Uterine Myoma, the use of Antiseptics in Midwifery, Vaginal Extirpation of the Uterus, and the Introduction of Premature Labor formed but a small part of a very full programme. Space forbids even a reference to the numerous other sections representing various branches of medicine and surgery. The experience of the meeting has suggested whether in future some plan may not be devised to facilitate the work of the sections by the previous circulation of abstracts of the papers to be read before the Congress. In point of magnitude it is hardly probable that the Congress of Berlin will for a long time to come be surpassed. The next meeting is to be held at Rome, in 1893, the President elect being Professor Baccelli.

HOSPITAL MIRROR.

WE have been guided during the past year in the selection of cases for the Mirror of Hospital Practice by the same rules that have always obtained with us in this department of *The Lancet*. The contributions which have reached us have come principally from hospitals in the United Kingdom and Ireland, but many have been forwarded from the Colonies, and some from the United States. They have illustrated the treatment of many and various conditions, some of them by the employment of drugs, others by the adoption of surgical procedures, both in the various general and special departments of medicine. Rare pathological changes, unexpected complications of injury or disease and unusual symptoms have been described. Whilst we have not always excluded reports of cases where the contributor, having possibly erred in his treatment, has sent notes of the case for the information of others, our readers will recognize the fact that we do not always approve of the course adopted because the description is afforded space in our columns. We have continued the custom of making editorial comments on the reports as they have appeared from week to week, and that this is a feature of the department which is appreciated, has been clearly indicated to us in many ways. Occasionally these comments have of necessity been limited, the cases having been fully commented on in the remarks appended to them; but when we have thought that a statement as to the more recent knowledge on any

subject would be of interest, we have endeavored to place it as concisely as possible before our readers. We propose to pass in review some of the most important of the cases that have appeared, and regret that want of space will compel us to limit the number very considerably. This year, again, we have published notes of an operation by Porro's method in the case of a rachitic dwarf aged twenty-five, both the mother and child surviving. This was the third pregnancy. At full time in the first craniotomy was performed at seven months, in the second labor was induced. The patient, who was only three feet, nine and three-fourths inches in height, presented great deformity of the lower extremities, and the pelvic measurements were much changed from the normal; the diagonal conjugate was three and one-eighth inches, the actual conjugate two and three-fourths inches. The original intention of the operator was to perform Cæsarean section, but after the insertion of sutures the uterus relaxed, and hæmorrhage ensued to such an extent that it was necessary to remove the uterus, which was done in the usual manner. A good example of the reduction of old-standing inversion of the uterus by means of the elastic repositor is given; the woman, aged forty-five, had been previously regarded as suffering from cancer of the uterus. The inversion was due to a large polypus; there had been superficial necrosis of both uterus and tumor, and, later, a sudden extrusion of the entire mass from the vulva. The polypus was only removed in part at first. It was sessile, and there was no very marked boundary between it and the uterus. There are few examples of the successful reposition of chronic inversion of the uterus on record, and fewer of its reduction by means of sustained pressure. The contributions to abdominal surgery have been numerous and very interesting. In two cases rupture of the coverings of a hernia is described; in one the woman, aged fifty-six, the subject of femoral hernia of long standing, had undergone operation for strangulation three years before; the coverings gave way at the cicatrix during a fit of coughing, and she walked some distance for treatment afterwards. Recovery followed careful cleansing of the protruded parts and suturing of the rent. In the other case the thin coverings of an old umbilical hernia gave way when the woman was straining, and a protrusion of small intestine took place. The escape of the intestine was attended with much shock, and it became nipped by the

opening through which it had passed ; it was returned after cleansing, and the wound sutured ten hours after the accident ; but the patient (who was very stout) did not recover from the shock, and died next day. A most unusual cause for acute obstruction of the small intestine was seen in a patient seventy-six years of age. Severe symptoms had persisted for six days without any improvement, and abdominal section performed on admission to hospital revealed recent perforation of the part of the intestine affected, the vessels leading to which had been completely blocked by embolism. An addition to the series of seven successful operations by abdominal section for the relief of intussusception in the adult, previously recorded, was given in the case of a woman aged twenty-six. Symptoms commenced suddenly two days before operation and ceased after it. The intussusception was easily reduced by the operator, when fully exposed. This form of obstruction is one which causes considerable anxiety to the medical attendant, and the question as to the advisability of abdominal section in any case should always be kept in mind. Of operations introduced during recent years, that of excision of the pylorus for cancer has proved one of the least satisfactory in its results. The shock of the operation is usually severe, and the majority have died after the operation from that cause. As the fatality was to a large extent due to the long time required to suture the parts after removal of the growth, any modification of that process which should prove effective, and shorten the time required, could but be welcomed by the profession. And the use of the interrupted suture and Senn's bone plates would appear to have brought us nearer success than any other method, if we may judge by the result in a patient aged fifty-six, for whom this operation was performed. An account of the removal of part of the bladder wall with peritoneum over it for epithelioma, being the second operation of the kind performed in this country, shows the possibility of attacking some of these growths at an early stage with at least temporary success. The patient, a woman aged fifty-five, extremely stout, died from hæmatemesis on the third day after the operation. The cause of death appeared to have nothing to do with the removal of the disease, for everything was quite satisfactory in the region of operation. We have space only to permit of the brief mention of one other curious case in genito-urinary surgery, that of a man aged

forty-three, who received an injury to the abdomen, not of great severity, continued work for four days, and was then seized with severe pain in the back, suppression of urine, vomiting, and rigors. He died thirteen days later, and at the necropsy it was found that the ureter leading from the left kidney had become blocked with an inspissated thrombus. There was no kidney on the other side. Two examples of hernia cerebri in boys aged six and eight, both of whom recovered, are reported. In the former it developed after removal of bone in a compound depressed fracture of the skull, with laceration of the brain; in the latter, after operation for traumatic abscess of the brain. In both the hernia was in the frontal region, and in the second the treatment extended over more than a year. The recovery of a patient who had attempted suicide by driving nails into his head with a hammer is remarkable. These, which were three-inch French nails, were placed mainly in the mid-line of the scalp, and three out of the four driven home, but no ill-effect followed their extraction beyond slight suppuration in the scalp near one puncture. Amongst the cases illustrative of thoracic surgery is one of double empyema in a boy aged six. A portion of rib was removed from the right side about a fortnight after the commencement of the illness, and twelve days later a similar operation was performed on the left side. Recovery rapidly followed the operations. The good result of the bath treatment in hyperpyrexia developing during the course of rheumatic fever, complicated with pneumonia, has seldom been better shown than in the case of a man aged forty-two. Salicylate of soda, digitalis and stimulants were given internally, but the baths appeared to produce more than a temporary effect on the temperature curve, which was above 107° on several occasions. The relationship between chorea and rheumatism was exemplified in the case of a child aged eleven. The choreic symptoms, which were accompanied by aphasia, were of severe character and two months' duration, but it was not until she had been a month under treatment in bed that rheumatism developed. This case would appear to be confirmatory of the theory of Koch—that the choreic virus is so closely related to that of articular rheumatism that either disease can be caused by it. Other very interesting cases we can only mention are:—Cholecystotomy for gallstones; extensive operation for hernia and removal of omentum in a woman aged eighty; chronic obstruction of the

intestines by safety-pins; three cases illustrating the good effect of abdominal section for tubercular peritonitis; supra-vaginal hysterectomy; compression of the femoral artery for a period of 184 hours, resulting in the cure of a popliteal aneurysm; ligature of the external iliac for femoral aneurysm—in one patient the aneurysm was circumscribed, and in the other diffused; simultaneous fracture of both clavicles; fracture of the anatomical neck of the humerus and dislocation of the head.—*Lancet*, December 27.

Modern Treatment of Strabismus.

In the paper the author contrasted the idea formerly prevalent, that the squint operation is very easy of performance, and requires no special accuracy in the estimation of the amount of deviation present, with the modern view that the correction of strabismus should be preceded by the most careful and accurate tests, and that the operation should be a graduated one, controlled by the most precise examinations made before and during its performance. Adopting Mauthner's division of squint into spastic, accommodative, concomitant and paralytic, he pointed out that the first two varieties were in the main to be corrected by fulfilling the causal indication; *i. e.*, spastic squint, being usually due to hysteria, meningitis, or some other disease of central origin, requires treatment directed to these affections; while accommodative squint and strabismus exanopsia demand relief of the ciliary spasm by means of atropinization and correction of the faulty vision. In concomitant squint, the apparently obvious indication of tenotomy is by no means universally indicated, and he drew a strong line of distinction between cases with marked relaxation of the tendons, in which advancement (including sometimes, even advancement of the apparently contracted tendon) was required, and cases with too great tension of the tendons, in which tenotomy (including even, perhaps, tenotomy of both of two opposing tendons) was demanded. He cited a remarkable example of a case of squint, with tendon relaxation, in which a divergent squint was rendered less by advancement of the external rectus, and quite cured by advancement of all four of the lateral recti. In paralytic squint, after briefly adverting to the general inutility of constitutional treatment, he enunciated Alfred V. Graefe's rules

for the operative treatment. These are, in brief, to do the compensating operation (tenotomy of the associated antagonist) wherever possible, *i. e.*, in paresis of the internal and external recti, and of the superior and inferior oblique; to do tenotomy of the direct antagonist only in paresis of the lateral recti, and then only as an adjuvant to the compensating operation; and to advance the paretic muscle in paresis of the superior and inferior recti, and also in paresis of the lateral recti when the preceding operations are insufficient. He cited two cases of paresis of the superior oblique seen by himself, one of which he had successfully treated by operation; and one case each of paresis of the superior and of the inferior rectus, likewise successfully treated according to V. Graefe's rules.—Dr. Duane, in *Virginia Med. Monthly*.

Tuberculosis.

DR. ROBERT KOCH, *Brit. Med. Jour.* (International Med. Congress). Very soon after the discovery of the tubercle bacillus, I set about seeking for substances which could be used therapeutically against tuberculosis, and I have pursued this search, which has, of course, been often interrupted by my other occupations, perseveringly up to the present. In the belief that there must be a remedy for tuberculosis, I do not by any means stand alone. Billroth has, in one of his last writings, expressed himself with all possible distinctness to the same effect, and it is well known that the same object is aimed at by many investigators. It seems to me, however, that the latter have not as a rule followed the right way in their investigations, inasmuch as they have begun their experiments on man. To that I ascribe the fact that everything which people have believed themselves to have discovered in that way—from benzoate of soda down to the hot-air treatment—has proved to be a delusion. Experiments must in the first place be made, not on man, but on the parasites themselves in their pure cultures; even if substances have been found which have the power to check the development of tubercle bacilli in the cultures, man should not forthwith be chosen as the subject of experiment. But the question whether observations which have been made in a test tube hold good also in living animal

bodies should first be settled in animals. Only if the experiments on animals have proved successful should the method be tried on man. Proceeding according to these rules I have in the course of time tested a very large number of substances to see what influence they would exert on the tubercle bacilli cultivated in pure cultures, with the result that not a few substances have the power, even in very small doses, of hindering the growth of tubercle bacilli. More than this, of course, a remedy can not do. It is not necessary, as has often been erroneously assumed, that the bacteria should be killed in the body; in order to make them harmless to the body it is sufficient to prevent their growth, their multiplication. I have proved the following substances to be remedies which hinder such growth even in very small doses (to mention only the most important)—A number of ethereal oils; among the aromatic compounds, β naphthylamin, paratoluidin, xylidin; some of the so-called tar-dyes, namely, fuchsin, gentian violet, methyl blue, chinolin yellow, aniline yellow, auramin; among the metals, mercury in the form of vapor, silver and gold compounds. The compounds of cyanogen and gold were especially conspicuous, their effect surpassing that of all other substances; even in a dilution of one to two millions they checked the growth of tubercle bacilli. All these substances, however, remained absolutely without effect if tried on tuberculous animals. In spite of this failure I have not allowed myself to be discouraged from prosecuting the search for growth-hindering remedies, and I have at last hit upon a substance which has the power of preventing the growth of tubercle bacilli, not only in a test tube, but in the body of an animal. All experiments in tuberculosis are, as every one who has had experience of them has sufficiently discovered, of very long duration; my researches on this substance, therefore, although they have already occupied me for nearly a year, are not yet completed, and I can only say this much about them, that guinea-pigs, which, as is well known, are extraordinarily susceptible to tuberculosis, if exposed to the influence of this substance cease to react to the inoculation of tuberculous virus, and that in guinea-pigs suffering from general tuberculosis, even to a high degree, the morbid process can be brought completely to a standstill, without the body being any way injuriously affected. From these researches I, in the meantime, do not draw any further conclusions

than that the possibility of rendering pathogenic bacteria in the living body harmless without injury to the latter, which has hitherto been justly doubted has been thereby established. Should, however, the hopes based on these researches be fulfilled in the future, and should we succeed, in the case of one bacterial infectious disease, in making ourselves masters of the microscopic, but hitherto victorious, enemy in the human body, then it will soon also be possible, I have no doubt, to obtain the same result in the case of other diseases. This opens up an oft-promised field of work, with problems which are worthy to be the subject of an international competition of the noblest kind. To give even now some encouragement to further researches in this direction was the sole and only reason why I, departing from my usual custom, have made a communication on a research which is not yet completed.—*Weekly Med. Review.*

CHRONIC, SO CALLED RHEUMATIC AFFECTIONS.—When the term chronic rheumatism is used, it should be limited to those cases in which the joints are painful but not swollen, or in which there is a neuralgia or an arthralgia associated with myalgia or apart from it; or in which the fasciæ are affected, or in which there is a general neuralgic condition supervening on an acute attack of rheumatism. This is what we prefer to call “chronic rheumatism.” But in speaking of the symptoms of rheumatoid arthritis, I will made reference to those symptoms which are sometimes put down as common to both. Let us imagine two patients sitting side by side, one with chronic rheumatism and the other with rheumatoid arthritis. Now, what do we see? In the rheumatoid arthritis case the first thing that strikes us is most probably the pallor of the patient, as compared with the chronic rheumatic. We look a little closer, and the next thing we perceive will most probably be the joints. The patient with the chronic rheumatism will present in this feature little or nothing; whereas, on the other hand, the rheumatoid arthritis patient will be more or less crippled. There will be distinct muscular atrophy in the rheumatoid arthritis case, and the complexion will present the pallor mentioned before, showing on closer inspection yellowish tinges on the face, neck, and perhaps elsewhere. If we ask both patients if they ever had rheumatic fever, they will probably say No; but further inquiry will elicit the proba-

ble fact that the family history of the patient with rheumatism will be a good one, or perhaps at the most a rheumatic one, while the rheumatoid arthritis patient in most cases gives or shows a strumous taint. It is upon the basis of this strumous taint that we feel we must look, for further assistance to guide us in the treatment of this terrible crippling malady. It is nearly always present more or less. We are aware that this strumous history has not been particularly referred to in other descriptions of the disease. It being the almost invariable accompaniment has induced us to bring the matter forward. In fact, to look upon struma and rheumatoid arthritis as cause and effect, has seemed to us the one plain characteristic in our investigations.—*Lane, in the Lancet.*

CREASOTE IN PHTHISIS now has an established reputation; unlike most of the therapeutic measures that have been vaunted as infallible for the cure of consumption, this one has really kept its place for a considerable time, and although it has never aroused much enthusiasm or figured conspicuously in the daily newspapers, it is undoubtedly of real value. Dr. Wm. H. Flint, of New York, has recently published his experience with the drug in seventy-three cases of phthisis in all stages. He has given the creasote by the stomach, by the rectum and by inhalation. Pure beechwood creasote has been used, by mouth in doses gradually increased until the limit of toleration was reached, usually about ten or twelve minims a day. For inhalation a mixture of equal parts of creasote, alcohol and spirits of chloroform was used, beginning with fifteen drops on a Robinson's inhaler. Dr. Flint's opinion of the remedy was distinctly favorable, and his judgment is confirmed by that of many observers on both sides of the Atlantic.—*N. W. Lancet.*

Microscopy.

San Francisco Microscopical Society.

Reported for the CINCINNATI MEDICAL NEWS by Wm. E. Loy, [Recording Secretary.

HENRY G. HANKS called attention to a very old reference to lenses, or magnifying-glasses, which he recently found in

an old work, "The Vanity of Arts and Sciences," by Henry Cornelius Agrippa. The edition shown last night was an English translation, published in 1676, from the original Latin edition, published in 1527. The reference alluded to reads thus:

"So we read, as Caelius in his ancient writings relates, that one Hostius, a person of an obscene life, made a sort of glasses, that made the object seem greater than it was, so that one finger should seem to exceed the whole arm, both in bigness and thickness."

Pursuing the subject further, Mr. Hanks said, it was found that Caelius Antipater (to whom Agrippa probably refers) was a Roman historian who lived 125 years B. C. He wrote a history of the first Punic War, only parts of which were extant. So far as known, this was the first account of magnifying-glasses in history.

Henry Cornelius Agrippa, the author of this curious old book, was born at Cologne in 1486, and was a man of talents, learning and eccentricity. In his youth he was secretary to the Emperor Maximilian, and was knighted for bravery in Italy. On quitting the army he devoted himself to science, and made pretensions to an acquaintance with magic. In 1530 he wrote his treatise "On the Vanity of the Sciences," which was a caustic satire upon the inefficiency of the common modes of instruction. After an active, varied and eventful life he died at Grenoble in 1539.

One of the principal objects of the Bureau of Animal Industry connected with the Department of Agriculture, Washington, Dr. Curtice said, is the protection of stock from infectious diseases communicated by imported animals. When its work was first begun, pleuro-pneumonia had been communicated from cattle imported from England or Holland into this country at Baltimore and Philadelphia and in Kentucky. A general act of Congress, with the coöperation of the several States interested, enabled the representatives of the Bureau to stamp out the disease in these localities. This could only be accomplished by a rigid quarantine and immediate slaughter of cattle known to be infected. The Government has made an annual appropriation of \$500,000 for the Bureau and Dr. Curtice said the greater part of this sum was employed in attacking the disease where it had appeared, and only a very small por-

tion remained for original investigation. Against this small appropriation, it is reported that the disease has cost the English Government \$10,000,000 each year for several years past.

The investigations of the Bureau into the Texas cattle fever were begun last year, and are now in progress. Mapping the country, and indicating the northern limit where this fever has been epidemic, a line through Virginia, Northern Tennessee and Missouri, corresponding to the 2,000-foot level, would mark its course. From the western borders of Missouri the line bears to the southwest, passing through Indian Territory and into Texas. The infectious feature of the disease disappears with frost, although infected cattle may communicate it after a hard frost and during a warm season, which frequently occurs in the fall of the year.

During the progress of the investigation last year, Dr. Smith discovered what he believed to be the germ of the Texas fever. In examining fresh blood he noted small masses of amœboid form moving in the red corpuscles. On examining the fresh blood from the infected animal from day to day, these amœba-like masses were found to have increased in number and the red corpuscles to have visibly diminished. Dr. Smith's investigations were arrested by the appearance of cold weather last fall, and consequent checking of the disease; but he is now pursuing it, and hopes to have results which will enable him to certainly diagnose the disease and experiment with remedies.

The work of the Bureau of Animal Industry, in the various diseases of cattle, swine and poultry, and the differentiations noted, have been accepted by European workers, and will stand. Besides the blood diseases, the Bureau is now investigating glanders and tuberculosis at Washington, and material has been abundant, as an act of Congress permitted the killing of any animal in the District of Columbia afflicted with these diseases.

After the close of Dr. Curtice's address general discussion and questions and answers followed, and many other points were elucidated. The Doctor's special study has been animal parasites, and he goes to Bakersfield to-day to make further observations on the parasites of sheep. A vote of thanks was unanimously tendered the speaker and the meeting then adjourned.

Kühne's Method of Preparing Tubercle Bacilli.

IN the *Centralblatt für Bakteriologie und Parasitenkunde* of a late date, Dr. Kühne gives the following method of preparing tubercular sputum for staining and examination. The main difficulty found by most persons is the viscosity of the sputum, which effectually frustrates all attempts at getting on the cover glass a smooth and even layer of the material. To avoid this, the author first agitates the viscid material with an equal volume of a saturated watery solution of borax, the effect being a solution which is very easily spread. The nummular matter from cavities is, similarly, treated with an aqueous solution of ammonium carbonate. When a glass spread with the latter is passed over the flame the carbonate is largely volatilized. The subsequent steps are identical with those of the older methods—staining with fuchsin, bleaching with nitric acid and alcohol (1:3) and counterstaining. As a counterstain Kühne prefers a solution of picric acid in anilin oil. We have tried Kühne's method, and while the results are not so fine as in Biedert's process, its simplicity and rapidity recommend it over the latter, which is complex and tedious.—*St. Louis Med. and Surg. Journal*.

The Products of Pathogenic Bacteria.

DURING the past two years, great progress has been made in the study of the action of pathogenic bacteria. This work has chiefly been carried on by Koch and Pasteur on the Continent, and by Drs. Sidney Martin and Hankin in England. In the *Revue de Medecine*, 1890, No. 7, Dr. Charles Bouchard publishes an article on the properties of the substances secreted by pathogenic micro-organisms. It contains the chief part of his address before the Tenth International Congress on the "Mechanism of Infection and Immunity." After an exhaustive summary of all that is known concerning the action of products of metathesis with which we are acquainted, Bouchard relates a series of thirty one experiments which he made, partly in order to investigate the power which blood-serum possesses of destroying bacteria, and partly to ascertain how far their products confer an immunity against similar or other bacteria. Many experiments demonstrated the influence of the same

products on phagocytosis. The space here is too limited to enter into the details of this interesting paper, but the general results of Bouchard's investigations are as follows. Among the substances secreted by the microbes are some which have an inhibitory action on them—that is to say, these products tend to retard the development, increase, and characteristic action of the micro-organisms; other substances are favorable to their growth. These, however, only act indirectly by modifying the material upon which they grow (peptones, etc.). Such products may be favorable or unfavorable for other microbes. Some organisms produce poisonous substances upon which depends their virulency. Amongst pathogenic microbes are some which secrete substances that confer upon animals inoculated with them an immunity against these particular germs; this they do not by their presence only, but by modifying the animal organism, so that it forms a less favorable pabulum for the development and growth of the bacteria, and causes the leucocytes to perform the process of diapedesis more rapidly, and to assume their functions as phagocytes more energetically. If an animal be inoculated with these substances, together with a pure culture of the same bacilli from which they are obtained, the disease runs a more rapid course, whilst its development will be delayed or prevented if the animal be inoculated a few days before the injection is made. If bacteria which act antagonistically towards one another be cultivated together in a test-tube, the soluble products of the “stronger” can be made to retard the development of the “weaker” organism. So that if an animal be inoculated with the products of metathesis of the “stronger” at the same time as the active principle of the “weaker,” the action of the latter will be delayed and weakened. Some microbes appear to assist the action of others; these Bouchard terms “auxiliary microbes.” By this means an animal may be infected with a disease which it would otherwise resist.—*Lancet*.

Demonstration of Karyokenetic Figures.

ACCORDING to Dr. B. Solger (*Archiv. fur Mikros. Anatomie*), the amnion of the embryo rat is a better and more easily obtainable material for the demonstration of the figures than the mesentery of the young rabbit, which has

hitherto been recommended to students as the best object for the study of karyokenesis. Besides the fact that it is readily obtained almost anywhere and at any time, the rat amnion presents the further advantages that it may be studied without the tedious processes of embedding and sectioning. Solger's technique is as follows: The freshly dissected horn of the uterus is put at once into a saturated aqueous solution of picric acid and immediately afterward the chorion is cut open with scissors. The amnion then separates as an exceedingly tenuous membrane enveloping the embryo. Let remain in the picric acid solution for twenty-four hours, remove and wash in alcohol of 70°. The dilute alcohol is gradually replaced by stronger until 95° per cent. is reached. The material is then stained either with Ehrlich's acid hæmaloxylin or saffranin after Flemming's method.—*St. Louis Med. and Surg. Journal.*

Proceedings of Societies.

Gynecological and Obstetrical Society of Baltimore, Maryland.

December meeting—Vice-President, Dr. Chas. H. Riley, in the chair.
Reported for the CINCINNATI MEDICAL NEWS.

DR. WM. E. MOSEBY related the following case:

Mrs. Maggie G., a light-colored woman, about thirty years of age, twice married, had had two children by her first husband. Had suffered much during the past twelve years from dysmenorrhœa; had been unable to do ordinary work.

Examination showed the uterus to be retroflexed and firmly bound down, but the character of the adhesions could not be definitely made out. There was an irregular-shaped elastic mass in the position of either tube, diagnosed as cystic ovaries, together with chronically inflamed tubes. All the pelvic tissues were very sensitive to pressure. There was a deep, double laceration of the cervix, and a lacerated perineum with very lax vaginal wall, but only slight rectocele.

When the abdomen was opened, the mass on either side of the pelvis was found to be composed of a cystic ovary and the corresponding tube firmly matted together by old

organized adhesions, each mass being firmly bound down to the pelvic wall by numerous strong and many more recent adhesions. There were also adhesions to the omentum. The left ovary ruptured before it could be removed. The mass in the right side appeared to be a large hæmatosalpinx, but examination proves it to be an ovarian cyst, into which blood had entered from a ruptured Graafian follicle. The adhesions behind the uterus were very broad, strong bands, and were pulled off the uterine walls. All possible care was used to secure the patient against hemorrhage, and the abdomen was douched out with hot, boiled water until the return flow was practically colorless. A glass perforated drainage-tube was introduced to the bottom of the cul-de-sac, and the incision closed about it. The extreme difficulty of separating the adhesions and the douching prolonged the operation to about one and a half hours.

Although stimulants and artificial heat were pushed, no reaction could be obtained, the temperature never reaching 95° , and the patient died about six hours after the operation, apparently from shock. At no time was there any discharge of blood, or even bloody fluid, from the drainage-tube. Dr. N. G. Kierle; however, kindly examined the pelvic cavity, post-mortem, and reported that death was due to hemorrhage, the exact source of which could not be made out. Dr. J. Whitridge Williams kindly furnished the pathological report, which will be given below.

Dr. Thomas Opie exhibited a placenta that he had gotten a few hours before the meeting from a case of placenta previa.

The patient was thirty-five years of age, and had borne one child previously. When he saw her first she was blanched and exsanguined. The blood flow began three days before with a loss of a quart, and continued with more or less rapidity up to the time of operation. Her confinement was not expected for two weeks. When first seen by him there were some rhythmical pains and some dilatation. The cervix was dilated with the fingers and cone of the hand; the placenta was detached with a sweep of the forefinger around the cervix; the bag of waters was artificially ruptured and traction-wad forceps applied. The child was delivered in fifteen minutes without further loss of blood; the placenta coming away simultaneously with the birth of the child. Though the position was occiput-posterior, there was no laceration of the perineum, and the child was unscathed. Both mother and child were left doing well.

Dr. Opie also exhibited a specimen of an ovarian tumor, which he had recently removed. The tumor had developed into the epigastric region, and the abdomen was about as large as it would have been at the full term of pregnancy. It took two hours to break up the adhesions, which were very dense between the tumor and the intestines, and between the tumor and the omentum. The second tumor was taken from the pelvis. It was ovoidal in form, about seven inches in length, by five inches high and four inches thick. It was removed entire, and upon section it proved to be a dermoid growth. There was no history of peritonitis to account for the extensive adhesions. The patient had never had a day's discomfort, other than from the size of the cyst. She did not know until four months ago that she had a tumor. The material in the large cyst was colloid. Notwithstanding the extensive adhesions, the length of time consumed in breaking them up, and the injury resulting from the operation, the patient has made a good recovery, this being the seventeenth day after the operation.

Dr. Howard A. Kelly: The term colloid is often used in two senses. An incorrect use, describing the yellowish, more or less opalescent, thick, viscid material often found in ovarian cysts; it is employed in such cases as more or less synonymous with gluey. The other use of the term is to describe a rare condition, in which the contents of the cyst are more like calf's-foot jelly and have a vitreous fracture. They are with great difficulty removed, clinging to everything. This latter is true colloid, and, when found, such tumors are of a suspiciously malignant character. We should limit the use of the word to the latter condition.

I wish to refer to two minor matters of interest suggested by this specimen of placenta previa. The position which the placenta has occupied in the uterus can accurately be determined by the position of the opening in the membranes made by the passage of the child; inasmuch as the fundus-uteri must, of necessity, be just opposite to this perforation. We can, therefore, by reconstructing the membranes, see just in what part of the uterus the placenta lay. In one of my placenta previa cases there was no hole at all in the membranes, as I had extracted the dead child through a perforation in the placenta. We can do still more than this in the way of a diagnosis with the membranes. By allowing them to be expelled untouched into the bed, and

carefully observing their exact position, we can tell as well on which side of the uterus the placenta was attached.

The second point is, that we may have placenta previa hemorrhage without being able to detect a placental margin, owing to a low attachment of part of the placenta, near the internal os, below the contraction ring, but not over the hole of the cervical canal. The lower part of a placenta thus attached is separated by the opening up of the lower uterine segment.

Dr. L. E. Neale said: Although *Dr. Kelly* had alluded to a point of some interest, it is of far more practical importance to recognize placenta previa prior to its expulsion, and, as far as he knew, this could only be done with certainty by digital examination. Partial placental separation and rupture of the membranes during labor in cases of placenta previa was outlined by *Mariceau* as early as 1668, but was fully described by *Puzas* in 1759. He saw nothing in the history of the present case as related by *Dr. Opie* that contraindicated the method of *Braxton Hicks*, a method that, up to the present time, had given by far the best results—viz.: $4\frac{1}{2}$ per cent. maternal mortality. If this method, when practicable, could be performed earlier than delivery by any other method, and was not difficult and gave the best results, why not have applied it in the present case?

Dr. Wilmer Brinton asked why *Dr. Opie* objected to the tampon in cases of placenta previa. He thought no arbitrary law could be applied.

Dr. Opie said, in closing the discussion, that results of operative procedure depended largely upon the skill and familiarity of the operator with the special operation resorted to. In his first case of placenta previa he had attended he had turned and lost both mother and child. With rapid dilatation and forceps he feels that he has command of the situation, and having resorted to that method repeatedly, has gained greater skill and does better work. While *Dr. Neale* might do better by some other method, he is fully satisfied that he does best himself with the forceps. He is opposed to the use of the tampon because it conceals what is going on. It is not best to wait for pains. He is in favor of rapid dilatation and delivery in placenta previa, in puerperal eclampsia, and in abortion. To put in a tampon and go away is hazardous. The tampon is of very little help in hemorrhages.

Dr. Kelly read a paper upon "The Examination of the Normal Pelvic Viscera," describing various bimanual and trimanual methods of palpating the normal ovary.

Dr. Wm. P. Cheever: When speaking of what should be found or can be found at an examination, it is necessary to consider the circumstances under which the examination is made. Office examinations are the most usual, and all the facilities are not usually at our command; and this circumstance should be specified and taken into account. Certain advantages in methods give certain advantages in results. Of course, where the woman has no ovaries, or where the ovaries are not in the pelvic cavity, they can not be palpated.

Dr. Hunter Robb: I thoroughly agree with *Dr. Kelly* that the normal ovary can always be palpated under an anæsthetic; and also that in a large number of patients the ovary can be outlined without anæsthesia. Four years ago, *Dr. Kelly* taught me the method of examining the ovary by invaginating the perineum, and I can testify to its utility. This lengthens out the examiner's finger and thus enables the practitioner who has a short finger to accomplish it with almost the same facility as a longer one. The corrugated tenaculum devised by *Dr. Kelly* may be used to advantage with many patients to define the uterus and its appendages still further. No one, of course, would think of using it in inflammatory conditions of the pelvic cavity.

Dr. B. B. Browne said that he had listened with much pleasure to *Dr. Kelly's* paper and congratulated him upon the admirable manner in which he had systematized these valuable methods of pelvic examination—methods which most of us had been using in our gynecological practice for several years. He generally preferred the use of two fingers in the vagina, as he could thus make a more satisfactory examination of the tubes and ovaries than with one finger. In many cases a more accurate idea of the adhesions can be had by getting the finger above the ovary and fixing it between the finger and the spinal column; pulling down the uterus aids diagnosis very much.

Dr. Opie said there were few objections to *Dr. Kelly's* paper, but it seemed that the elbow on the hip is incompatible with delicacy of touch, the law as expressed by *Martin* being—"The more lightly the parts are touched the easier the goal is reached, and the less the force that is employed, the more distinctly things are felt." He thinks it a cruel sort of thing to drag an organ out of its position,

and would like to know how much displacement can be made with the tenaculum without producing dangerous trouble; for example, cellulitis, metritis and injuries to the periuterine tissue. He had met a number of cases in which he had not been able to make out the ovaries. Dr. A. Martin says he can palpate normal tubes, but Dr. Opie has never been able to reach that degree of perfection.

Dr. Neale referred to the possibility of tracing out the ureters through the anterior vaginal wall, as had been demonstrated to him by Dr. Kelly at the Hopkins Hospital Clinic. He had no doubt that in a large majority of cases the normal ovary could be displaced out of its normal position and palpated or touched with ease through the vaginal walls. He believed that a great deal of difficulty in an ordinary gynecological examination was due to the fact of neglecting to empty the bladder or to employ the rectal touch.

Dr. H. P. C. Wilson said there were a larger number of women in whom he was sure he could not palpate the ovaries; and he was doubtful if any one could do so. The uterus is often found fixed in the pelvis as in a mass of putty, and no definite outlines can be made out. In other cases the abdominal walls are from two to four inches thick with fat, and in such cases he had failed to find the ovaries.

Dr. J. Whitridge Williams said that he could certainly feel the ovaries in four cases out of five, and that he has succeeded occasionally in finding the ureter.

Dr. Moseby: The old teaching is that the ovaries can not be palpated in their normal position. When an ovary can be found by an ordinary examination, its location may surely be considered as abnormal. If Dr. Kelly's idea, that all men who can not make out normal ovaries should be thrown out of the specialty, should be enforced, a large number of experienced and thoroughly informed specialists would be excluded from practice. It is practically impossible to examine every patient thoroughly enough to make out the normal ovaries in office examinations. In dispensary (and more especially in hospital) practice the case is very different.

Dr. Browne thinks that the cases in which the ovaries can not be felt are the abnormal cases. If the symptoms point to an examination of the ovaries, they can be made out, but, if necessary, an anæsthetic should be given.

Dr. Kelly, in closing the discussion, said that he examines

every case coming to him vulva to ovaries, making a special note of every important organ.

When the patient complains of persistent pelvic pain the examination is never considered complete, or the diagnosis sure, without a special note as to the condition of the ovaries. I have been asked about examining the ureters by palpation. They can be felt in almost all cases, being distinctly traced from the anterior part of the pelvis back to the side of the uterus. Pressing upon a diseased ureter causes a desire to pass water, often irresistible. I prove that this structure is a ureter by catheterizing it. The catheter can be felt through the vaginal wall outside the bladder, in the ureter, and the urine collected as it comes down from the kidney drop by drop. The Falloppian tube can often (but not always) be made out.

The amount of displacement of the uterus which can be made without injury is considerable. In normal cases it can easily, and without harm or pain, be brought down to the vaginal outlet. When there is fixation, gentle traction can be made until pain is felt. In these cases I use traction with the corrugated tenaculum, and then, pushing up the fundus with the finger, practice massage, stretching the adhesions. I am sure that the downward traction to the vulva without pain never does any harm.

Dr. J. Whitridge Williams' remarks upon the pathological specimens submitted to him by Dr. Moseby, Dr. Wilson and Dr. Opie.

The specimens submitted by Dr. Moseby are of considerable interest, and consist of the uterine appendages from both sides. The specimen from the left side consists of the Falloppian tube, ovary and part of the broad ligament. The tube was completely occluded at its fimbriated end, but otherwise presenting nothing abnormal, except numerous small adhesions. It contained a very small amount of dirty, yellow fluid, consisting of columnar ciliated epithelial cells and numerous disintegrated cells. The ovary was considerably torn and covered by very dense adhesions, while the broad ligament presented nothing of note. The specimen from the right side was an irregular mass of tissue about $5 \times 4 \times 1\frac{1}{2}$ cm., consisting of the tube and ovary imbedded in dense adhesions. At first glance the mass appeared to be composed of two parts, a large, solid anterior portion covered by dense adhesions, and posterior to it a cystic structure about $4 \times 1\frac{1}{2}$ cm. in size. This had a bluish

color, thin wall, and was intimately connected with the rest of the mass. Imbedded in adhesions a piece of the ampullar end of the tube was found, which could be traced for about 4 cm. and then lost itself in the mass, and appeared to have no connection with the above-mentioned cystic portion. The main portion of the mass on section was shown to be composed of ovarian tissue, which was covered and completely hidden from view by very dense adhesions. It contained two tolerably fresh corpora lutea about $1\frac{1}{2}$ cm. in diameter. The larger of these corpora lutea communicated by a small opening with the cystic portion above mentioned, which contained a thin, reddish, watery fluid containing blood-cells. On cutting open this cystic portion its walls were found perfectly smooth, with several smaller cysts projecting into it. These varied in size up to 2 cm. in diameter, and were filled with a clear, watery fluid and arose directly from the ovarian tissue. On examining the scrapings from the walls of these cysts, I found that they were lined by a layer of almost flat cutoidal cells, which were distinctly ciliated. These cysts could not have originated in the tube, as was readily demonstrated by their arrangement in relation to the larger cyst, and by the lining epithelium, which was totally different from that of the tube. Their smooth interior precluded the idea of a ciliated papillary cystoma; and the only probable thing for them to be were dropsical Graafian follicles, which had been prevented from rupturing by the dense adhesions covering them, and so attained their large size. The fact that they were lined by ciliated epithelium is not at all opposed to this supposition; for cilia have previously been found in the dropsical Graafian follicle, as was shown by Von Velits of Budapest about a year ago; and as I found altogether independently of him last spring. But, as yet, I have not made a sufficient number of observations to assert that all dropsical follicles are lined by ciliated epithelium. The blood in the large cyst in all probability came from the corpus luteum with which it was connected. The adhesions about the ovary were particularly dense and resisting. The diagnosis from the specimen is pelvic peritonitis, with adhesions binding down the adnexia on both sides, particularly the right side, with several very large dropsical Graafian follicles.

The specimen submitted to me by Dr. H. P. C. Wilson was a small myoma, about 3 cm. in diameter, and had on one surface a piece of vaginal mucous membrane the size

of a two-cent piece. The tumor was submitted to me to decide whether its origin was from the anterior fornix or from the uterus itself. Sections made through the tumor and the vaginal mucous membrane readily showed it to be a myoma, which was separated from the submucous tissue and epithelium by numerous bands of non-striated muscular tissue. From the presence of muscular fibers between the tumor and epithelium, I think we are justified in concluding that it was not of vaginal origin. Were it of vaginal origin it should arise from the non-mucous tissue and be immediately adjacent to the epithelium and not separated from it, as it was in this case, by muscular tissue. Force is lent to this conclusion by the fact that vaginal fibroids are very rare indeed, and many of the reported cases, especially fibroids from the anterior fornix, had their origin in the anterior wall of the uterus instead of the vagina.

The specimen submitted by Dr. Opie was a greatly hypertrophied posterior lip of the cervix, which measured 5 cm. in length and 2 cm. in its broadest part. Microscopically, it was found to consist of almost normal cervical tissue, with only a very slight increase of the connective tissue. Except at the cut surface, the entire mass was covered with the usual stratified epithelium.

Generally speaking, we may distinguish two forms of hypertrophy of the fontis-vaginalis—follicular and diffuse or simple hypertrophy. The first form is due to an increase in number and size of the cervical glands, with frequent retention of their contents; and is quite frequent, but never attains a very great size, and is readily distinguished by its nodular appearance. The diffuse or simple form of hypertrophy is far more important. In this there is a general increase in all the elements that compose the cervix, though there may be a slight increase in the amount of connective tissue, as there was in this case.

Dr. Howard A. Kelly read a paper upon the palpation of the NORMAL UTERINE APPENDAGES (published in full in the February number of the *American Journal of Obstetrics*). He stated that the normal uterine appendages could always be palpated. There are two avenues of approach, by the vagina and by the rectum, and three ways of utilizing these avenues. First, with one hand; second, with two hands employed bimanually, either by vagina or rectum; and third, the trimanual method, by vagina and by rectum.

First, the examination with one hand is unsatisfactory

and the ovary can not even be felt unless abnormally displaced downward into the recto-uterine pouch.

Second, the success of the bimanual examination depends upon the downward pressure with the external hand, displacing the abdominal walls in the direction of the ovary to be palpated, and thus affording a resistant plane against which the ovary can be felt by the internal hand. The internal hand must be used to invaginate the perineum, which is thus displaced upward into the pelvis. This invagination gives the examining finger, even though it be a short one, the necessary length. One, often even two, inches, are thus gained to the palpating finger. Care must be taken in making the pressure necessary to produce this invagination, not to stiffen all the muscles of the forearm, thus impairing the tactile sense.

The rectum is, of all others, the best avenue for approaching the structures lateral to the uterus, affording as it does a wide, open channel throughout the whole length of the pelvis. Where the structures can not be reached at once through the rectum, they are brought within easy touch by bringing the uterus and ovaries into an *artificial retroposed anteflexion*, the mechanism of which was carefully described, by diagrams. Dr. Kelly had, in this way, palpated fibroid tumors on the posterior surface of the uterus near the fundus, not as large as a pea.

Third, the trimanual examination is conducted either by the vagina or by the rectum and vagina, assisted with the hand above. The peculiarity of this method is an *artificial descensus uteri*. The uterus is grasped with a pair of bullet forceps and drawn downward until the cervix is seen at the vaginal outlet, and while an assistant holds it in this position, the gynecologist uses his hands bimanually. To obviate the employment of an assistant, Dr. Kelly has invented an instrument which he calls the corrugated tenaculum, flattened and roughened so that it can be readily held between the last phalanges of the third and fourth fingers and the ball of the thumb, while the index finger of the same hand, assisted by the abdominal hand above, is engaged in making a vaginal or rectal examination.

By one or the other of these methods, the uterus, broad ligaments and ovaries and tubes are within reach of a most thorough and searching examination, revealing at once the structure and abnormalities.

WILLIAM S. GARDNER, M.D., Secretary.

Book Notices

DISEASES OF THE EYE. By Edward Nettleship, F.R.C.S., Ophthalmic Surgeon to St. Thomas's Hospital; Surgeon to the London Hospital; Late Ophthalmic Surgeon to the Hospital for Sick Children. Fourth American, From the Fifth English Edition. With a Chapter on Examination for Color-Perception. By Wm. Thomson, M.D., Professor of Ophthalmology in the Jefferson Medical College of Philadelphia. 12mo. Pp. 508. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, \$2.00.

A work that has reached four editions in this country does not need any commendation—its merits must be very well known by the profession and by medical students.

The object of the author in preparing the work was to furnish medical students with a text-book suited to their wants. There were, at the time, many excellent treatises on diseases of the eye, but, while they met the wants of specialists who had had long experience, they were not suited to the use of students engaged in studying the elementary principles of ophthalmology.

The work of Mr. Nettleship gives brief but very satisfactory descriptions of ophthalmic affections—just such as medical students in attendance upon medical lectures require—have time to give attention to. There are but few references to authors, and no discussions of unsettled questions. The treatment marked out in the case of each disease is such as the author's experience approves.

Such a work as the one on our table should be in the libraries of physicians who can not readily, on account of locality, refer their patrons with eye affections to a specialist; and are under the necessity of treating many of them themselves—at least the less serious ones. The work being small, it can be easily studied—thus qualifying the general practitioner to treat properly those eye diseases that circumstances compel him to take charge of.

In presenting the medical profession of this country with a fourth edition of Nettleship's work no pains have been spared to place it in every particular abreast of the times in setting forth the latest developments of the specialty of which it treats.

A PRACTICAL TREATISE ON IMPOTENCE, STERILITY AND ALLIED DISORDERS OF THE MALE SEXUAL ORGANS. By Samuel W. Gross, A.M., M.D., LL.D., Professor of the Principles of Surgery and Clinical Surgery in the Jefferson Medical College, Philadelphia; Formerly President of the Pathological Society of Philadelphia; Author on Tumors of the Mammary Glands; Fellow of the American Surgical Association, etc. Fourth Edition, Revised by F. R. Sturgis, M.D. 8vo. Pp. 173. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, \$1.50.

The author, in the preface, very justly, we think, mentions with pride the favorable reception that has been accorded his work. It has now attained its fourth edition, has received favorable notices from the periodical press, and has been translated into the Russian language. It has been the aim of the author, as he states, to supply in a compact form practical and strictly scientific information, especially adapted to the wants of the general practitioner, in regard to a class of common and grave disorders upon the correction of which so much of human happiness depends. In the chapter on sterility, the abnormal conditions of the semen and the causes which deprive it of its fecundating properties are fully considered—a portion of the work intended to supplement the subject of sterility in the female. He says that from answers addressed to many of the most prominent writers in this country on gynecology, he finds that, with few exceptions, the woman alone commands attention in unfruitful marriages. The importance of examining the husband before subjecting the wife to operation, he thinks, will be best appreciated when he states that he is, as a rule, at fault in at least one instance in every six.

The work contains very many facts in regard to the sexual disorders of men of the most interesting character. Physicians who, in their practice, have nothing to do with these diseases will find the volume entertaining. We commend the study of it to every professional man, especially to those engaged in the general practice of medicine, for such are frequently consulted by individuals who are worried almost to the point of insanity in regard to their sexual organs, who could be easily relieved of their intense uneasiness if those whom they consult were in possession of some of the practical information contained in this small

volume. We do not know of anything that produces so great a depression of the feelings, in the majority of men, as an apprehension that the sexual functions have become permanently disabled. This is as true with one who has bound himself by the strongest bonds of celibacy as with the unprincipled libertine.

Editorial.

SEXUAL STERILITY.—Prof. Gross, who has written a work upon the sexual disorders of men, the fourth edition of which will be found noticed among the Book Notices of the present issue of the NEWS, says that acute and chronic diseases impair the fertility of the semen of persons advanced in life, as has been well shown by the investigations of Duplay and Dieu, since of 156 instances in which the fluid contained in the vasa deferentia or vesiculæ seminales of old men was examined, spermatozoa were found in only one-half. Dividing the cases in accordance with the periods of life—

Of 25 sexagenarians	spermatozoa were found in	17-68 per ct.
“ 76 septenarians	“ “ “	40-59.2 “
“ 51 octogenarians	“ “ “	19-37.2 “
“ 4 nonagenarians	“ “ “	0

In none were they present after the age of eighty-six, and they decreased *pari passu* with advancing years.

On analyzing the causes of death, it is stated that spermatozoa were entirely absent in affections of the urinary organs; that they were present in only thirty-eight per cent. of diseases of the nervous system; and that they were discovered, respectively, in 68, 70 and 81 per cent. of disorders of the lungs, the digestive organs, and the heart. Hence it may be assumed that while diseases of the kidney and brain exert a most prejudicial influence upon the formation of the zoosperms, affections of the other great systems interfere with their development to only a slight extent.

Of the seventy-six cases, says Prof. Gross, in which spermatozoa were found, they were abundant in fifty, and fewer

than usual in twenty-six. They were perfectly formed in fifty-four; and in twenty-two their tails were absent or shortened, and they varied in size. From these facts we may infer, he states, that the inability of old men to procreate arises more from impotence than from the composition of their semen; and this view is supported, it is alleged, by the fact based upon fifty-one examinations made by Duplay of the testes of men from sixty to eighty-six years, that the secreting organs are perfectly normal in structure, and slightly diminished in size and weight.

The editor of the MEDICAL NEWS knew an old man of seventy-four years of age, who, marrying a healthy woman aged thirty, begat a child.

Prof. Gross mentions a number of drugs whose use are attended with impotency. That tobacco tends to lessen the powers of the sexual organs, and also diminishes sexual desire, there can be no doubt. The intemperate use of spirituous liquors exercises the same effect.

Sexual excess will bring about a total absence of spermatozoa in the semen. Rest will generally restore them. But long continued excesses often result in their permanent disappearance.

THE COMPOSITION OF KOCH'S LYMPH.—We understand that Prof. Ernest Laplace has written a private letter in which he gives the probable composition of Koch's lymph for the cure of tuberculosis. It is stated that intimate personal relations exist between him and Koch, and that, under Koch, he received a thorough training in bacteriology. We quote as follows:

"So far as we can learn, the material which is used by injection for the cure of tuberculous disease is itself a product of the action of the tubercle bacillus upon a culture medium, the composition of which has not yet been made known, under conditions which are also still unrevealed. It probably contains, in addition to the *toxine* or *toxines* to which its activity is due, a minute quantity of cyanide of gold, as a protective against possible contamination with the bacilli themselves. 'Koch's lymph,' as it is called, is prepared for use in the following manner: One gramme of the lymph, with 9 grammes of a 2 per cent. carbolic acid solution, constitutes the first (10 per cent.) dilution, from which a second (1 per cent.) dilution is made in a similar manner—9 grammes of carbolized solution being added to

1 gramme of the diluted lymph; and from this again a third ($\frac{1}{10}$ per cent.) dilution is made—1 gramme of twice-diluted lymph to 9 grammes of carbolyzed solution. This third dilution, then, contains 1 part of the lymph in 1,000 parts of the preparation, so that a dose of 1 gramme of fluid contains 1 milligramme of the lymph. As a rule, the patient is subjected first to this dose. Should no effect be produced by repeated doses, the amount is increased to a dose not exceeding 6 centigrammes. Koch always makes use of a freshly-prepared solution.

“Reaction is manifested both by local and constitutional symptoms: the latter comprise pain in the limbs, fever, sometimes chill, nausea and vomiting; in phthisical cases, cough and dyspnœa; and in a few cases sensorial disturbances, such as somnolence and delirium. The fever may rise as high as 40° or 41° C., in which event great cardiac depression, and even collapse, are likely to occur. Sometimes the temperature suddenly falls to 36° or even 35.5° C. During the next day, however, there is a slight elevation of temperature to 37.8° or 39° C., called by Koch the ‘secondary reaction.’ The temperature again sinks below normal when the second stronger injection is given, which is followed by high fever, as before.

“The local manifestations consist in swelling and discoloration of the affected tissues, which finally necrose, and are either spontaneously expelled, or must be removed by surgical means.

“In cases of lupus, the local reactions, which are easily observed, have been very striking. The affected tissues become very red and swollen, surrounded by a raised border sharply defined, usually dark-red in color, in some cases whitish, and varying from the breadth of a few millimeters to that of a finger.

“After the subsidence of the fever, the swelling of the lupus-tissue gradually decreases and disappears. The lupus spots are covered by a soft deposit which desiccates into a crust; the crusts falling off, clean, red cicatrices are left. Of one case, Feilchenfeld says that the pathological tissue seemed to have been removed as with a punch.”

BACTERIOLOGICAL WORLD.—This is the title of a new journal devoted to the study of bacteriology and diseases due to micro-organisms. It is meant for an adjunct to medical and surgical journals of all kinds, having for its

mission the general dissemination of knowledge on the subject of bacteriology in general, and pathological micrology in particular. It is edited by Paul Paquin, M.D., V.M., Director Bacteriological Laboratory, State University, Columbia, Mo. The collaborators so far are, Dr. Paul Gibier, Director of the New York Pasteur Institute; Prof. Belfield, M.D., Polyclinic School of Chicago; Dr. J. W. Stickler, Orange, N. J.; Prof. L. Bremer, St. Louis, Mo.; Prof. Paul Schweitzer, Missouri State University; Dr. A. W. McAlester, Dean Medical Department, Missouri State University. Other collaborators of a high order are expected to be secured.

Impressed by the great disadvantages under which the busy medical practitioner finds himself in his attempts to keep pace with the rapid progress of medicine as directly influenced by the accumulation of facts brought to light by numerous foreign and American investigators in this domain, the editor, after advising with several prominent scientific and medical men of the country, decided to venture in the field of journalism on the subject.

The public at large has been appalled at the multiplicity of harmonizing discoveries brought about by scientific men, and shedding such a glowing light on the causation and prevention of disease. Pasteur, Koch, Loeffler, Billroth, Cohnheim, Belfield, Klebs, Cohn, Chauveau, Shakespeare, Babis, Sternberg, Carnil, Lister, Klein, Tomasi Crudeli, Nocard, Welch, Crookshank, Chantemesse, Detmers, Salmon, Arloing, Cornevin, Billings, Schutz, Smith, and a host of others of national and international reputation, have been for years searching in the dark natural history of the invisible life and endeavoring to penetrate the secrets of microbic existence. What marvelous results were obtained! Following in the path indicated by the remarkable genius of Pasteur, and enlightened by the perspicacity and learning of the experimentalist Koch, investigators have put the world in possession of facts that have revolutionized the practice of medicine and hygiene among the progressive nations and progressive men of the art and science.

Each number will be appropriately illustrated.

The *Bacteriological World* will be published monthly, at \$3.00 per annum invariably in advance. In order to assist the subscribers of the MEDICAL NEWS to subscribe, Dr. Paquin has consented to accept \$2.50 from such who subscribe through us.

THE CINCINNATI MEDICAL NEWS.

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New Series.

Original Contributions.

The Constitutional Treatment of Caries and Necrosis.

BY HAL C. WYMAN, M.S., M.D.,

Professor of Principles of Surgery and Operative Surgery in the Michigan
College of Medicine and Surgery, Detroit, Mich.

THE surgical aspects of these distinct maladies have been the subject of discussion by surgical writers from the earliest times. Good surgical treatment implies constitutional treatment as well as operative methods. My purpose in submitting this paper is not so much to show any particular method of operative interference, as to indicate the great value of judiciously selected constitutional treatment in repairing these particular diseases.

A glance at the minute anatomy of bone, and a consideration of the conditions under which the repair of damage takes place, shows that bone, like the softer tissues of the body, requires good food and pure air, essential factors in the production of good blood, for its normal sustenance. The relation of the digestive process to the maintenance of vigorous and nutritious bodily fluids is apparent to those most inexperienced in the management of disease. Any derangement or impairment of the digestive process, or ferments, produces a consequent impairment of blood supply delivered to the bones. The days and nights of pain incident to the usual course of caries or necrosis disorganizes the digestive functions. The shock and fear, and choliform narcosis incident to the operative procedures, frequently necessitated by these diseases, also undermine the digestive functions.

Children are the most frequent sufferers by these diseases. The impaired digestive functions in children yield more readily to properly selected treatment than is the case with

adults. The conversion of starch into sugar by the digestive ferments is more frequently impaired in children suffering from caries and necrosis than is the conversion of albuminoids into assimilable substances. The use of artificial diastase is, therefore, indicated on the best of physiological grounds. Hip-joint disease, caries of the spine, chronic inflammation of the knee, and caries of the long bones are for some reason constantly accompanied by mal-assimilation and indigestion of the starches. When such cases proceed to a good, sound recovery, it is through a thorough restoration of this particular digestive power, or a compensatory increase of the digestive power for hydrocarbons. In no case of hip-joint disease, were the operative methods ever so carefully or skillfully performed, has there been a repair of lesions until the digestive ferments have handled the starches perfectly. The same fact applies to the other varieties of bone diseases above mentioned.

My experience in the treatment of hip-joint and spinal cases, necrosis and caries of the various bones, embraces large numbers of cases, probably because my professional brethren have lacked the patience and perseverance and rigid attention to the digestive power essential to the cure of these long-time maladies. The Trommer Extract of Malt has been of great service in enabling me to bring numbers of these cases to a happy termination, and in a space of time of shorter duration than is accomplished by the use of cod-liver oil or hypophosphites.

From my case-book I quote the following cases:

1. W. S., aged eight years; parents, farmers; residence, Lenawee County, Mich. Double hip-joint disease; sinuses in the right gluteal fold over the right trochanter near the base of the left scarpus triangle, on the inner aspect of the left thigh; could drink milk, but ate no bread nor potatoes; was ordered teaspoonful of Trommer's Extract of Malt every three hours; was put on a diet of corn meal, bread, potatoes, milk and eggs. Sinuses was laid open, drainage effected by maintaining free openings with oakum tent; plaster of Paris applied to the thighs and pelvis to limit mobility of hip-joints. Sinuses closed at the end of five months; ankylosis of left hip; limited motion of right. Came under treatment May, 1877; has had no return of the disease to date.

2. Miss F., aged sixteen years. Consulted me on account of a constant, dull, uneasy feeling in the epigastric

region; emaciation and pallor; poor appetite; movements awkward; pain in riding; could walk easier than sit; examination of the spine revealed small fluctuating tumor about two inches to the left of the spinous processes, between the eighth and ninth ribs. Diagnosis:—Caries of the dorsal vertebra, with abscess pointing between eighth and ninth ribs. Put upon the Extract of Malt—tablespoonful every four hours. Abscess was opened by incision and double drainage tube inserted to the depth of four inches. Abscess cavity washed out daily with one per cent. solution of carbolic acid. Profuse discharge of pus for two weeks; plaster of Paris jacket applied; discharge of pus was succeeded by a thin serous fluid; pain disappeared from epigastrium; progressing favorably for two months. Passed into the hands of another practitioner; plaster of Paris removed; drainage tube withdrawn; sinus closed. So-called blood medicines administered; pain returned in a couple of weeks; sinus reopened; angular curvature developed suddenly. Came into my hands again. Marked angular curvature, gibosity; abdomen distended and lower part compressed, narrowed in upper portion; severe epigastric pains; tongue white, pasty. Sleepless, feverish. Reapplied plaster of Paris; enlarged sinus and introduced drainage tube; washed out cavities as before and readministered Trommer's Extract of Malt—tablespoonful doses every four hours for one and a half years. Drainage tube came away spontaneously; sinus is healed; plaster was reapplied four times; patient at date has no return. Has married and is mother of one child—healthy.

3. J. R., aged thirteen years; Monroe County, Mich.; large, raw-boned boy. Had been sick four months; left thigh flexed upon the abdomen; toe inverted; fluctuation in obliterated left gluteal fold; pain in the knee; sleepless; no appetite; temperature 101° . Abscess opened and drainage tube inserted. Plaster of Paris applied to the leg, thigh and pelvis; limb and thigh extended under chloroform—one inch added to the right sole; used crutch. Took Extract of Malt in tablespoonful doses every four hours, and six months after coming under treatment all sinus closed; injury repaired by ankylosis.

4. W. R., aged fourteen; residence, Fulton County, Ohio; German parentage; was robust farmer's lad until attacked two months before I saw him with phlegmonous erysipelas of the right leg and left thigh and knee; sinus

had opened on the outer aspect of the right leg and behind the external malleolus. Probe passed along the whole length of the right fibula, gave the rough feeling indicative of necrosis; left thigh and knee joint swollen; fluctuation in the left ham; fever, chills, hectic; left leg laid open by incision along the course of the fibula, and whole of that bone removed from the malleolus upward. Abscess in the left ham opened by free incision; treated by drainage by means of tent. Knee, left leg and thigh put in plaster to immobilize left knee. Took Trommer's Extract of Malt, tablespoonful every three hours. Wound in right leg healed promptly; fever disappeared; abscess in left thigh healed, and knee joint healed by ankylosis in two months after treatment began.

5. German boy, aged nine years; residence, Lenawee County, Mich.; good general health; was lost in woods over night while searching for cattle—fall of snow same night; boots were ragged, feet suffered terribly from frost. Came under my treatment three weeks after the exposure; had been sick ever since; fever and chills; sinus had opened about the left heel; foot and ankle swollen and *œdema* tous; probe showed the *os calcis* carious and necrosed. Incision across the heel below the insertion of the *tendo achilles*, *os calcis* removed with forceps; wound washed daily with weak carbol-solution. Took teaspoonful of Extract of Malt every three hours. Cured in four months, but foot not of much use.

These cases occurred so long ago that plenty of time has elapsed for return of the disease if the cures had not been perfect. They are sufficient to show the value of the treatment employed. Other cases have occurred since, and have recovered. Many other cases are still under treatment, and will recover.

I attribute the good results in the cases mentioned fully as much to the artificial digestion of starchy foods craved by these patients as to the operative methods employed, and believe that in many instances the cases would have progressed to the same happy ending had the rigid attention to the diet only been employed, but more time would have been necessary.

Analogies Between Insanity and Other Diseases.

BY S. S. SCHULTZ, M.D., OF DANVILLE, PA.

WHEN the Practice of Medicine began to be broken up into specialties, one of the largest and most important fragments that continued to maintain an independent existence was, no doubt, the treatment or care of the insane. The product of this differentiation has continued for fourscore years; from the time when, in the beginning of this century, insanity was first considered to be a proper subject of medical treatment. Whether for good or evil, and in spite of strong protests from influential quarters, the results of this process have become fixed, crystallized; of this the laws of every civilized State are both cause and proof. We need not search long or far for the causes which have brought about this result. It lies on the surface, that, so long as the human body is subject to disease and decay, its various functions will be correspondingly disturbed or destroyed.

When the bone is broken, or the muscle paralyzed, or the joint made tender by inflammation, natural motion becomes impossible, and the entire body has to be placed under circumstances that respond suitably to this local ailment. When the eye, in any one of its organic elements, becomes diseased, its function—vision—is disturbed, and a series of symptoms appear, entirely unlike those of the locomotor troubles just referred to. New and different appliances are called for to cure the disease and alleviate its discomforts while being cured. The treatment instituted, in the one instance, might evince the utmost skill, but no one need to be informed that it would be a failure if applied in the other, even if the nature of the two diseases were the same. A like result will be reached if any other part of the body be considered. The symptoms of disease in it will vary according to the nature of the functions it performs, and the treatment must vary also.

When that portion of the nervous apparatus becomes disturbed through which the mind in its various faculties during this life displays its operations, we must expect that the symptoms will again have an exact relation to the function of the organ involved. The work or duty of the brain being to manifest the operations of the mind, it follows that, it being diseased, the mental manifestations are

disordered. The judgment, the conscience and will being all made powerless for their proper work by disease in the brain, the instrument with which their functions are performed, the resulting conduct will be erratic, and it may be so to the extent of destroying the good order or the safety of the community. Such conduct is a symptom of the disease, and it has to be met by such appliances as are best suited to alleviate it while the disease is being cured by the same or other means. Now, if long-continued experience can speak with authority, the insane hospital combines more of the requisites to this end than any other method of treatment yet devised. But the existence of the hospital implies a specialty. Its existence, then, is due to the peculiar symptoms of a disease which has possession of an organ whose office in the human economy is peculiar. It is not due to any mystery in the disease itself greater than that which is inherent in any other vital process. But my purpose here is not so much to point out that there is a good and substantial reason for the existence of such a specialty, as to set forth some of those analogies which bind insanity and other diseases together, not only in their causes and nature, but also their treatment.

What is insanity? It should not be a matter of surprise that no satisfactory definition of it has ever been formulated, or that each person's answer to this question should be unlike that given by any one else. Our conception of an object, and our representation by words of that conception, must bear the impress of our mental training and experience. In proportion, also, as that object has many sides and complicated relations to ourselves, is there room for diversity and seeming contradiction in our notions of it. As of the leaves of the forest or of the millions of human countenances no two are alike, so no two persons have had the same mental experiences, and been able, therefore, to look upon such a complex phenomenon as a disordered mind in the same light, or form of it the same conception. Insanity is one thing to the man who studies it in a public hospital, which is the receptacle of every variety of mental defect and disorder and incapacity to get along in the world; it is another thing to the person who sees only the more active forms of it in the sufferer's own home. It is not even the same to hospital students, unless the existing laws which control the movement of the populations whom they observe are somewhat alike. The physician gets his idea of

the disease from observing and studying it in its causes, antecedents, pathological relations and effects and ultimate outcome. To him it is one thing. Another person studies it in the light of decisions, precedent, human enactments and *a priori* speculations of a metaphysical character. To him it is another and different thing.

There are many people who occupy a position in studying insanity which would compel them, were they to transfer their logic to corporeal conditions, to deny the existence of bodily disease. There would either be complete health or death. No function could for them be disordered; it must be annihilated. There would be either normal life or no life, for they recognize no mental disorder unless all indications of mind are wanting. To them insanity is dementia. The prince who failed to make all his clocks mark the same hour of the day at the same time, and thence reasoned that he could not make all his subjects think alike, was a philosopher; the man who holds up the apparent want of agreement in definitions of insanity as a necessary sign of ignorance is a bigot.

Approaching the answer to the question, What is Insanity? a little closer, I refer to the obvious fact that the term insanity is one of a large but diminishing class of words in catalogues of diseases which do not stand for diseases at all, but only for certain combinations of symptoms. It is in this aspect analogous to dyspnœa, dyspepsia, dropsy. Dyspepsia is a symptom of all the various ailments which attack the stomach, and we can not conceive of a disease in this part of the body sufficiently grave to attract attention unaccompanied by some trouble of digestion. Whether there be ulcer, cancer, dilatation or atrophy of its coats, simple catarrh, gastritis, faulty secretion, deficiency or impairment of the nerve or blood supply, or any other defect or impairment, the work of the stomach must be interfered with, and this result of the affection, which often throws other symptoms into the shade, is dyspepsia. It is not a particular form of disease, or even any disease at all, but only a prominent symptom of all diseases located here. The difficult, perverted or absent function being the most noticeable attendant of the disease, whatever it may be, gives, by figure of speech, the designation by which it is usually known. Could the stomach be explored, and its condition determined as promptly and as surely as in the

case of the eye or the skin, for instance, there would be little use for the word in the sense which it now bears.

For the sake of brevity and convenience, derangement of mind, mental diseases, are spoken of; but it is not meant that any disease or morbid process is destroying the integrity of the mind, the spiritual, invisible part of our natures. This remains unchanged in the wildest storm of maniacal fury or the deepest fatuity of secondary dementia. In the present constitution of things, operations of the mind can show themselves only through a material instrument or organ, and this is furnished by certain portions of the brain. When these are developed, matured, free from disease, and supplied with blood and other conditions of health, mental phenomena are normal, the mind is sound. The *mens sana* can exist because the *corpus sanum* exists. That the record of sense perception, judgment, feeling, will power, conscience, memory, may exist or be exercised normally, these central nerve organs must be healthy. Their diseased state implies disorder in some or all the mental phenomena. Not that the function of these nerve centers is to feel, to think, as it is of the stomach to digest, but that they are the instrument of thought, of feeling, and that, the instrument being in bad order, the work which it is employed to do must be correspondingly imperfect.

Once more, What is insanity? or, rather, What condition is the cause of those symptoms which are called insanity? In the widest sense, any bodily defect or disease which interferes with the mental operations. Practically, this statement must be limited or qualified; first, as to duration; unless the condition be somewhat chronic, it is not called insanity, however destructive it may be of mental operations; such is the case in apoplexy, acute meningitis; second, other symptoms present must not overshadow those which indicate interference with the mind; if they do, the title is derived from them. An illustration is found in a certain stage of typhoid fever. Third, this condition of interference with the mental operations must be of a certain gravity. No mind in its workings is perfect, any more than that any body in its functions is perfect; but imperfection in the one is not necessarily disease, nor is it in the other necessarily insanity. The first two qualifications referred to have no application, if a case be viewed with regard to any possible legal or moral responsibility.

In the ignorance, that is well-nigh total, of the condition of the purely nervous constituent of the brain, which is at the foundation of unhealthy mental operations, and of the manner in which this condition is influenced by diseased states of the non-nervous constituents, we may safely assume that the same abnormal processes of circulation, nutrition, absorption, innervation and growth which interfere with normal function in other parts of the body, operate in the brain, and that the same laws, in many respects, hold sway both without and within the cranium.

There is, therefore, no sharp or well-defined boundary line between mental soundness and unsoundness, any more than there is between health and disease generally. From the smallest perceptible mental incapacity to complete loss of mind, there may be, and often is, a line varying so little from the horizontal of health as to permit no perception of inclination from step to step. Comparing two sections taken from the ends of the line, the contrast is startling; but if two adjoining parts are considered, the difference is only with difficulty, if at all, perceptible. In that class of mental diseases which are simply exaggerated peculiarities, whether the result of inheritance only, or training also, it is often impossible to point out any one week or month in which the patient became deranged, though in the end there can be no doubt of the presence of insanity.

It is probably safe to say that no combination of causes can produce insanity unless there is an original peculiarity of nervous structure; with this, these causes might be in operation to the extent of destroying life, but there would be no insanity. Take a person with such a peculiarity, and from his early years instill into his developing mind ideas of economy, of the value of every penny, the importance of accumulating numbers of them, the sacrifices to be made for this purpose, and the good, for their own sake, to be seen in their rapid increase. Let such teaching by words be enforced by example, and the evils of failure in his efforts be brought out in vivid colors and a strong light. If a person with an inherited brain cell of the susceptibility referred to, and whose life by himself, or others for him, is planned after the manner indicated, is forced to see his mean hopes and groveling ambition daily disappointed, and the golden fruit he expected to pluck for himself falling unsolicited into the lap of rivals, a share of despondency slowly deepening into the darkest melancholy will, without

fail, come over his enjoyments, finally to end a long life, spent in increasing misery, in a violent, self-inflicted death. Such cases are found in real life. Here the final act of the tragedy was by no means the whole of it, as is too often assumed, alike by the learned and the unlearned, both equally unwise. One indispensable condition in its unfolding was that characteristic mobility, or whatever you may call it, of the brain cell in the mother's womb; and this again would have been impossible but for the abnormal mental or bodily life of antecedent generations. Concerning this long chain of connected events, no man will dare to say up to this link there is health, from that one there is disease; or concerning the person's life, up to this day he was sane, but after that he was insane. We can say, however, that the first link in the chain is sound, and that the last one is faulty; that fifty years ago this man was not markedly different from the mass of men, but on the day when he destroyed his life, he was so altered from himself that he was certainly deranged. It is only by a comprehensive survey of the whole life, or a considerable portion of it, that we are able to estimate correctly the nature of any of its small fragments. To take any one act of the life dissociated from every other, and to ask is that a sane or an insane act, is futile.

It is often thus in corporeal affections. Take that bundle of symptoms called dyspepsia. A lifetime of abuse of the stomach is required in some persons to establish it in a chronic form; and the process is so gradual, that it can be perceived only when long periods are considered connectedly. One twitch of pain, one acid eructation, one day's oppression with capricious or absent appetite, signifies nothing; these may be symptoms of an established indigestion or the temporary results of one act of imprudent eating.

Insanity is like some other diseases, in that it may exist for long periods and not be generally recognized, not be known even to persons of somewhat intimate relations. Man and wife, parent and child, living together in the bonds of a family, may fail to recognize insanity in one of their number, though existing, maybe, for months or for years. When the disease, as often happens, is developed slowly, those who associate with the patient every day are frequently not aware of the change that is coming over his feelings, thought and conduct, it is so gradual; they are educated to

accept what may at times startle them with its strangeness as a matter of course, and for the time being think no further about it. If Providence smiles on such a person, and his relatives are pleasant, his friends discreet and unable to judge his peculiarities harshly, and his fortune neither too small nor too large for his comfort, he may sink into the grave a real but unrecognized lunatic. But if, on the other hand, a severe business disappointment, a family affliction, a severe bodily illness, or storm of unrestrained passion drive the smooth waters of his life's stream into furious commotion, his true condition will be uncovered, too often, alas! by one of those terrible tragedies which shock an entire community. It is a matter of constant occurrence that the thoughtful friends of persons who have at last become so clearly insane that the fact can be no longer either misunderstood or ignored, remember words or conduct which excited only momentary thought by their strangeness, but which now, seen in the light reflected back from present events over months and years of time, are no longer meaningless freaks, but the initial symptoms of a terrible disease. These precursors take various forms.

A gentleman of exemplary moral and religious character, of energetic but judicious and safe business habits, entrusted with the management of large interests, engaged in speculations that nearly ruin his principals before they can be arrested. It was a lack of judgment, for him new and uncommon, but when years afterward he died of paralytic dementia, few failed to see that it was something more serious and radical. Had this man died earlier, of another disease, or been killed in an accident, the true nature of his business blunder would never have been admitted, for, even if the condition of things had been diagnosed, the prevalent theory does not acknowledge that to be insanity "which the wayfaring man, though a fool," does not see and know all about. In this instance the only symptoms implicated the mind as distinct from the affections and related to business matters.

In other and more numerous instances the emotions first feel the rumblings of the coming earthquake. In the family there is ceaseless suspicion and heartburnings, where, before, trust and tenderness had reigned. Such change of character remains a mystery until explained by the development of the disease, perhaps many years later.

Again it happens that in many mental operations which require no will power and involve no strain on the nervous system, being controlled more by habit than active thought, and little elevated above the reflex actions of the cord, no mental impairment is perceptible, though the brain be far from sound. Let now some emergency suddenly arise which calls into violent exercise both the emotional and intellectual powers, and failure of mind or insanity becomes at once developed. It may be difficult always to make out, from its effects, the distinction between such a condition and one of depravity, but that the distinction exists can not, I think, be doubted.

These phases of insanity so hastily sketched have all their counterpart or analogy in the history and symptoms of some bodily diseases, as, for example, atheroma and its effects in the larger internal arteries.

The treatment of the insane is subject to the same general principles as other diseases. The first step is to remove the cause if it still exists. In apparently the most desperate cases, this will often accomplish the most that can be done, where there is a possibility of restoration; and without it medical means are futile. The mass of the insane who gain entrance into State hospitals are so situated at home that this first step is impossible with them, unless they are completely removed from their old surroundings; and, practically, the applicants are in this regard often no better off than the indigent. If the statistics of the cases reported cured in the hospitals of this State for the last year, for instance, be examined with reference to the causes, it will be found that they were mostly of such a character that it was impossible, the way things go, to bring about this preliminary condition of cure, unless the patient be taken from home. In this, perhaps, is partly found the philosophy of the necessity which authors insist on, of hospital as compared with home treatment of the insane.

Another desirable condition here, as in other diseases, while recent, is rest to the function of the part most affected, and to maintain and improve the health of the sound parts of the system by suitable exercise. In the nature of things this is often impracticable, but it is to be aimed at. The religious monomaniac is greatly assisted in his recovery if the emotional part of his nature can be induced to rest, and his intellectual and reasoning faculties be set actively to

work. This principle admits of an extended application, and, I believe, explains some rules of treatment empirically established as most useful.

The last point of analogy between mental and other diseases here to be mentioned relates to the conditions remaining after so-called cures. A patient may recover of a pleuritis or an abscess, but the tissues affected will never be what they were originally, though their functions, or the functions of the part of the body to which they belong, may be performed as usual, or with no perceptible impairment. We call him completely restored, although organized effusion and cicatrices remain. We may suppose, though our senses or observation fail to prove it, yea, we must assume it, that an analogous condition remains when once by violent or serious mental disease the nutritive processes of the brain cells have been interfered with. This condition is as little amenable to the power of drugs as a cicatrix or organized lymph, in the former case. But the function of the nerve cell can never be fully regained, as its delicate work must have a perfect instrument. I believe that in this is found the reason for the frequent change of character, or permanent mental weakness, following brain troubles, or their incurability, *if* these things prevail more in alienism than in any other branch of medical practice.

Selections.

Colorado as a Health Resort.

BY E. C. ATKINS, M.D., COLORADO SPRINGS.

SINCE the subject of the climatic treatment of tubercular disease of the lungs is occupying so large a place in the mind of the profession at present, perhaps the observations and conclusions of a physician, made during a year spent in Colorado for tubercular lung disease, may be of interest to some of your readers; and the more so because I am led to think, from what I have seen during my stay here, that the Eastern physicians are not sufficiently well posted on the results to be obtained here in incipient cases, and

that a personal observation would lead them to be more hopeful in their prognosis of such cases.

One who is considered an authority here says that ninety-five per cent. of all cases that come in the early stages are either cured or greatly benefited. While that statement may partake somewhat of the largeness of things in general in the West, it is safe to say that more than half, and perhaps three-fourths, of such cases do recover. This is the fact which I think the average Eastern physician does not appreciate.

The results obtained depend very largely upon the nature and extent of the lesions and the general condition of the patient. While it is true that now and then a case, which, to all external appearances, is in the latter stages of disease, does recover and regain a fair degree of health, it is also true that most of such cases with extensive disease are not expected to recover, but will live much longer here than in the East.

To obtain the best results patients must come in the earlier stages, and the earlier the better, before the digestion and other general functions are seriously impaired. In a case where nothing can be found by physical examination, but where a slight cough and a very scanty expectoration exist, I believe the simple presence of tubercle bacilli in the sputum should decide in favor of Colorado.

The typical case, however, for treatment here is that where sufficient hæmorrhage has occurred to convince the patient that radical measures are necessary, and when the physical examination does not show extensive disease. Such cases are usually willing to come, and almost invariably do well. Hæmorrhage cases are more amenable to cure than catarrhal cases pure and simple; but next in line comes catarrhal pththisis with cough and expectoration, containing tubercle bacilli—or, more correctly speaking, tubercular bronchitis. Physical examination in such cases may reveal almost nothing, no râles, perhaps slight elevation of pitch at one apex. Such a case should come out at once, and a hopeful prognosis be given, for his chances are good. Next, cases in the second stage of disease with consolidation of one or both apices, with or without hæmorrhage. Such cases should be sent out and a fair or doubtful prognosis given according as the general condition of the patient is good or poor. A patient in this condition,

accompanied by night sweats, loss of flesh and strength, may improve rapidly, on coming here. It is well worth trying. It is all he *can* do, and many such recover.

What shall be done with cases well advanced, where the prognosis is bad, it is difficult to decide. Perhaps it is as well for them to stay at home. It is a question of prolonging life a few months or a year or two, with just a possible hope of improvement. The intelligent physician must decide, for there are no rules to cover such cases. I would say, however, "If in doubt, come!"

Simple prostration or weakness from loss of blood by copious or repeated hæmorrhage is no indication that the patient should not come, provided the disease is not extensive. Many such are brought on stretchers and do well.

The prevailing impression that coming to a high altitude is productive of fatal hæmorrhage is only a "bugbear" that has grown out of a few rare instances. Now and then such a case does occur, and a patient dies of severe hæmorrhage induced by the change of altitude; but among the thousands that come here, such accidents are rare, and usually in cases well advanced in the third stage of disease.

The whole question turns upon the physical signs more than on the present condition or strength of the patient. It must be a very sick person who can not be brought here with the present excellent facilities for traveling.

Such being the facts, how are we to account for them? What are the essential elements at work here for the cure of tubercular disease? I believe them to be about as follows:

1. Dryness of air.
2. Elevation of from four to six thousand feet.
3. Purity of air.

It is difficult to know which of these to place first, for all are absolutely essential. The first and second are not sufficient alone, nor are the second and third. The first and third *might* be, as is seen in cases cured in Southern California. Add to these three conditions a climate that admits of the patient being out of doors much of the time, at all seasons of the year, and you have the conditions complete for the cure of tubercular lung disease. This state of things exists in Colorado.

One who has ever lived at an elevation of eight to nine thousand feet realizes fully the effect of altitude upon the lungs; for it seems as if the air cells were distended to their utmost, and it is fair to suppose that this is the case, and

that air cells infiltrated by disease or collapsed by disuse are forcibly distended, giving the dry and pure air a chance to do its work upon them. That this is so is shown by the casts of cells and tubules frequently coughed up while in high altitude, which is not so common in lower.

And just here lies the advantage of Colorado over Southern California. California lacks one of the elements necessary for the cure of a majority of cases, namely, elevation. Moreover, while the air of California is pure and comparatively dry, it does not compare in dryness with that of Colorado, for the reason that California is on the coast, while Colorado is one thousand miles from any body of water, and between us and the ocean is a mountain range which condenses the moisture and holds it all on the other side, while on the east, north and south are the hot, arid lands of Kansas, Nebraska and Indian Territory. Thus the moisture shut out on the west and sucked up by hundreds of miles of parched plains on the east, leaves the air of Colorado so dry that one's mucous surfaces become parched and cracked until they become accustomed to the dryness. Moreover, there is in these elevated regions a tonic, something in the air, which, though indescribable, has a most marked effect upon all who come here. Call it super-electrification, or what you will, it is here, and under its influence the digestive functions are stimulated to their utmost, the appetite improves and becomes vigorous, the nervous system takes on new life, there is an exhilaration of the whole system, and a general improvement of all the vital functions results. The importance of this element in cases of phthisis will be readily understood.

Nearly all of the towns of Colorado east of the range are favorable to phthisis, and it remains to select a place congenial to the tastes and habits of the patient. While there is much to be said in favor of Denver, it is generally accepted that the smaller places which are freer from smoke and dust and the impure air, which is a common objection to all large cities, are to be preferred. Colorado Springs, Manitou, Idaho Springs and Canon City are among the more favored resorts.

One should be under the care of a physician here as well as elsewhere to obtain the best results. Most of them have "been through the mill" themselves, and their experience will be of great value. Personal experience is often too dearly bought.

Treatment of Obesity.

In an article on the "Physiological Treatment of Obesity," in the *New York Medical Record*, February 15, 1890, Dr. Walter Mendelson gives the following diet list made up as an average of two by Oertel and somewhat modified for American habits. Such a list is only to serve as a *general guide* to the patient to whom it is to be given. No absolutely hard-and-fast rules can be laid down, and patients under treatment should be seen—and weighed—from time to time; increasing one kind of food and diminishing another as occasion demands.

Breakfast: 1 cup (6 ounces) tea or coffee, with milk and sugar; bread, $2\frac{1}{2}$ ounces (2 or 3 slices); butter, $\frac{1}{2}$ ounce; 1 egg or $1\frac{1}{2}$ ounces meat.

Dinner: Meat or fish, 7 ounces; green vegetables, 2 ounces (spinach, cabbage, string beans, asparagus, tomatoes, beet tops, etc.); farinaceous dishes, $3\frac{1}{2}$ ounces (potatoes, rice, hominy, macaroni, etc.), or these may be omitted and a corresponding amount of green vegetables substituted; salad, with plain dressing, 1 ounce; fruit, $3\frac{1}{2}$ ounces; water, sparingly.

Supper or Lunch: 2 eggs, or lean meat 5 ounces; salad (radishes, pickles, etc.), $\frac{3}{4}$ ounce; bread, $\frac{3}{4}$ ounce (1 slice); fruit, $3\frac{1}{2}$ ounces, or fruit may be omitted and bread, 2 ounces, substituted; fluids (tea, coffee, etc.), 8 ounces. No beer, ale, cider, champagne, sweet wines and spirits. Milk, except as an addition to tea or coffee, only occasionally. Eat no rich gravies, and nothing fried. Patients should always feel *better*—never worse—under treatment. Lassitude and fatigue are signs that the muscular tissue, as well as the fat, is being reduced, and that more non-nitrogenous food must then be allowed.

Dr. Mendelson says: Never yield to the wishes of the patient to grow thin *quickly*. All reforms, to be lasting and beneficial, must be slow in action; they must be the result of education; they must be a growth from within, not an impress from without. And the cells of the body, in their infinite diversity of occupation resembling the citizens of a State, can by slow degrees be habituated to better things, to change their vicious mode of action to one harmonious with the welfare of the commonwealth. And when this education has once been established, continuance becomes a mere habit.—*Annals of Hygiene*.

The Neurotic.

BY THE LATE J. MILNER FOTHERGILL, M.D.,

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A WAXING experience of practice as a medical man brings with it many lessons. Among others one important matter it teaches, and that is, the essential difference between individuals. They are different in build, and equally unlike in temperament. This is broadly seen in the comparatively large bulk of country people as compared to town populations. See the massive men encountered at Carlisle on market day, with their mighty thews and sinews, and contrast them with the slight beings encountered in White-chapel. The effect of town life is to dwarf the physique. In the production of the result several factors are in action. The want of exercise in the fresh air, and with that a deficiency of oxygen, is certainly one matter. The amusements of a rural population are mainly conducted in the open air; while the amusements of town residents are mainly indoors with a very impure atmosphere. Then the excitement of town life leads to a rapid and precocious development of the nervous system, which tells injuriously upon the nutritive powers of the system. In other words, the rapid development of the medullary portion of the epiblast taxes the capacities of the mesoblastic structures on which the epiblastic structures rest for their nutrition. I may remind the reader that the epiblast or outer layer supplies the nervous system and the epidermis; the hypoblast or inner layer, the glands along the alimentary canal; while the mesoblast gives the bones, muscles, vascular system, genito-urinary organs, and the other tissues of the body. While there is a certain antagonism apparently between the epiblastic and hypoblastic tissues; and precocious nervous development goes on hand in hand with impaired efficiency on the part of the glandular elements of the digestive organs derived from the hypoblast. Puberty, too, comes swiftly upon the immature organism, and brings with it further demands upon the nutritive powers. The consequence of one thing and another is, that urban populations are physically inferior to rural populations. The stalwart countryman enters a town and settles down there. His descendants grow smaller till they die out, unless reinforced by draughts of fresh country blood. Probably, however, if

the puny town-dweller were restored to the country, his children would expand.

But as a matter of fact, in the country there are differences even in the members of one family. Speaking broadly, one will present the stalwart figure of a Norseman; while the other has the slighter framework of an Arab. The latter is the neurotic member of the family group. Why the various children should thus differ is hidden from us; but the fact remains. Of course there is a wide difference betwixt this neurotic of good family history in the country, and the degenerate neurotic of Shoreditch. Both are neurotics all the same, with the characteristics of neurotics. It is the difference of individuals of families. While the difference of the neurotic from the Norse type is that of races—of the small, dark descendants of the Cymri and the larger, fair descendants of the Norseman. The class of neurotics may be subdivided into the (1) healthy neurotic; (2) the degenerate neurotic; and (3) the strumous neurotic. But for the present consideration the class will be regarded as a whole.

The tendency of town life is to determine the physique toward the neurotic type, as may be seen by contrasting the small, dark beings of the living crowd at Madame Tussaud's with the larger, fairer personages who are to be seen represented there by *fac similes*; or by taking a tour round the picture galleries of Hampton Court Palace and comparing the present generation with the past. And as town dwellers are now the majority of the population, the neurotic comes before the physician with recurring frequency. Consequently the peculiarities of the neurotic are of growing importance to the medical man.

A typical neurotic will complain of indigestion, with acidity and flatulence; more or less constipation; of migraine accompanied by vesical irritability; of palpitation, or of anginal attacks, or failure of the heart's action, which differs from syncope in that there is no loss of consciousness. On questioning a neurotic, and still more a female neurotic, it will be found that there is a history of sediments in the urine. Not uncommonly, there is also a history of some skin trouble or other. She usually has dysmenorrhœa, with a scanty loss; and often complains of rheumatism. While most female asthmatics are of the neurotic type.

Here are a distinct series of phenomena presented in more or less entirety, along with the slight bird-like figure of the typical neurotic. If the neurotic be of a goodly size and stature, it is not unusual to see gouty affections of the joints, or even eczema. Indeed, in a very large proportion there is a distinct tendency to revert to the uric-acid formation—normal to the bird and reptile. We see that the description commences with troubles referable to the digestive organs, and this is a matter of considerable interest in conjunction with the uric-acid formation. A neurotic may have primary uncomplicated atonic dyspepsia, or, in other words, a feeble stomach. But more frequently the dyspepsia is accompanied by acidity and flatulence, often alternating. When this last is the case, there is almost invariably a history of lithates in the urine. What are the relations of the two? We have become so accustomed to associate this uric-acid formation (otherwise gout poison) with excessive consumption of food, and largely animal food, that "poor man's gout" is apt to be lost sight of.

But at this point a little consideration of the subject will teach us that the consequence of a capable liver chronically overtaxed, and of an incapable liver burdened by a normal and moderate dietary, will be the same, viz.: the reversion of the liver to the uric-acid formation. The bird and the reptile pass a solid urine consisting of urates. The mammalia have a fluid urine with the soluble urea as their form of nitrogenized excretion. But traces of the uric-acid formation cling to the most perfect mammals, even to the Bimana. The inheritance remains; and, when the liver is hardened, it reverts to the earlier primitive uric-acid formation, whether as a "rich man's gout" or "poor man's gout." The congenitally "insufficient liver" was recognized by Dr. Budd; and Dr. Murchison endorsed the view ("Functional Derangements of the Liver") that some persons come into the world with a defective liver incapable of much labor. Such a person is liable to bilious attacks with frontal headache, furred tongue, bad taste in the mouth of a morning; with bilious vomiting, or purging following upon constipation. Such is the bilious neurotic as compared to the dyspeptic neurotic. The bile acids both contain nitrogen, and one also contains sulphur. This chemical fact points to their descent from the albuminous elements of the food. The bile acids and uric solids have a common ancestry. And the neurotic who is bilious in early years,

commonly becomes gouty in middle age. It is the albuminoid elements of the food which burden the liver. Dyspepsia and bilious attacks are the protectors of the incompetent liver. The child who overindulges in rich food (of old called a "surfeit") pays the penalty in the form of a bilious attack.

But usually kindly Dame Nature, when sending a child into the world with an insufficient liver, protects this feeble viscus by endowing the child with a small appetite. It is a small, dainty, fastidious eater, much to the chagrin of its nurse. It grows up either suffering from bilious attacks, or it suffers from indigestion. Vain are all the attempts to improve it by "feeding it up." It simply can not be fed up! All attempts to do so are frustrated by the liver; which, instead of dealing satisfactorily with the increased amounts of food borne to it on the current of the portal vein, falls back or reverts to the uric-acid formation. When the liver is embarrassed, loss of appetite follows, and the food supply is cut off till the liver comes round again. To give tonics and bitters to improve (?) the appetite is to thwart Nature's processes; and to intensify the tendency of the liver to fall back or revert to the uric-acid formation in one case, and to increase and multiply the bilious attacks in the other. Nature will manage much better if left alone than when meddled with injudiciously. Many neurotics, especially ladies, have related to me their sad experiences from attempts to feed them up.

Many, too, and especially American ladies, have given vivid accounts of the hard work and energy displayed by their fathers. Long mental toil tells upon the liver; especially in stoical, undemonstrative persons, as seen in the production of diabetes and the vaso-renal change, commonly spoken of as "Bright's disease." This fact is one more instance of the truth underlying the statement—"The fathers have eaten sour grapes, and the children's teeth are set on edge." The fathers impair their digestive and assimilative organs (the tissues of the hypoblast) by mental toil; and their children come into the world with insufficient livers. Again, it is the story of the epiblast preying upon the hypoblast. The child possesses a bright brain and a crippled liver.

These neurotics are liable to have attacks of hemicrania or migraine. The pain is temporal, and through the eye and almost always unilateral; but very rarely on the left

side. Commonly the pain shoots through the eye, and sparks, or lines of light, are seen. Often the attack ends in vomiting. One curious association of migraine is vesical irritability. There is a constant call to empty the bladder; and frequently a considerable quantity of pale urine is voided, but not necessarily so; sometimes a larval attack occurs with mere mental irritability and the vesical trouble, without the physical pain.

In many of these dyspeptic neurotics can be found the tight artery, the large left ventricles with loud second sound, and the copious urine of the vaso-renal change. But usually this condition of the urine alternates with that of a small bulk of urine loaded with lithates. Renal changes, and especially cirrhosis, or interstitial nephritis (Bright's disease), are found in time.

Such a neurotic is rarely the mother of a large family; and when she is multiparous she lives in the country. The urban neurotic is commonly sterile. Probably the reason of this is imperfect reproductive organs. Irritable and tender ovaries are common among them, and this condition may interfere with perfect ovulation—the ova never becoming fully developed. The uterus is commonly small and infantile, and impregnation frequently results in abortion. Her child, when she has one, is small and delicate, and rarely survives the maladies of childhood. It is a bright-brained little fairy "too good for the world," upon which it soon turns its back, to the regret of all.

The neurotic is liable to palpitation, and to curious attacks of failure of the heart's action which are very alarming; but which, to the best of my knowledge, are not really serious. In fainting, or syncope, consciousness is lost; but in these attacks the sufferer is acutely conscious of intense mental pain. From the association of flatulence the neurotic dyspeptic experiences a good deal of pain in the region of the heart and parts referred to that organ. It is really wind pouched in the angle where the transverse colon curves downwards. As the elastic gas presses the heart through the thin diaphragm and causes it to beat irregularly, the association of the pain with the heart is convincing to the sufferer; who believes the heart to be the seat of actual disease. And this is not unfrequently the particular matter for which the physician is consulted. So strong is the impression on the mind of the sufferers, that sometime it is somewhat difficult to convince them to the contrary

The healthy neurotic is a small, active being of ceaseless industry; indeed, a typical example of the adage, "The sword will wear out the scabbard." Neurotic ladies use up every particle of energy, and then go to bed to recruit. Headache is the penalty of overexertion; but it constitutes no lesson. (If those who only see the neurotic bright and fascinating, when well enough to be outdoors and in society, could see her in her hour of suffering, they would be less pressing in their attention to her; and better comprehend the difficulties of her natural guardians in trying to take care of her.) Knowledge does not inspire conduct. They can take care of any one but themselves. Usually of high intelligence, they are incapable of foresight in the matter of "knocking themselves up," as the popular term goes. They are often unselfish, and do themselves a great deal of injury in devotion to some good object.

The degenerate neurotic of towns is usually a voluble agitator and spouter, teetotaler and vegetarian, when a man; as a woman, she is fidgety, "all up and down," as her friends describe her. When the degeneracy assumes a strumous aspect, it commonly takes the form of joint-disease. And most of the children we encounter in the streets minus a limb belong to this class. Such children have generally a family history which tells of one or more of the number having died of hydrocephalus in infancy, or of phthisis later on. Even when flighty, excitable and moodish, the neurotic is not so liable to hysteria as girls of the lymphatic diathesis, in whom the nervous system is defective.

The neurotic dyspeptic is usually a very pleasant patient, grateful for small mercies. It is difficult to get such a lady to follow out a proper dietary in consequence of her self-forgetfulness, and her dislike to have food specially prepared for her. While as for medicinal measures, the neurotic dyspeptic is the most difficult person to treat satisfactorily of all those who seek the physician's help.—*New England Medical Monthly*.

Malarial Fever and Eucalyptus Drainage.

THE planting of eucalyptus trees for the purposes of draining the soil in malarial districts is one which has met with some success. The Trefontane Convent at Rome had become positively uninhabitable, owing to the malaria which attacked—in many instances with fatal results—its

inmates. Senator Torelli presented a bill proposing that the estate annexed to the convent should be planted with eucalyptus as an experiment against malaria. The bill was passed, and the Trappist monks planted thousands of eucalyptus plants of all species on the estate. But still the malaria raged, and several monks suffered severely. It was, however, remarked that it was only the monks who had their cells looking on the central cloister who fell victims to the malaria. This suggested the idea of planting four eucalyptus trees at the four corners of the cloister. The plants, sheltered from the winds, soon grew to a great height. The immediate result was the complete draining of the soil in the cloister, and the disappearance of malarial fever from the convent.—*British Medical Journal*.

Points to be Observed by Elderly Males.

DR. R. HARRISON offers the following advice to elderly men: 1. To avoid being placed under circumstances when the bladder can not be emptied at will. Nothing is so bad for a large prostate, though it may be working satisfactorily, as an enforced retention. It is often the first cause of a permanent atony. 2. To avoid checking perspiration by exposure to cold, and thus throwing additional work on the kidneys. In climates like our own, elderly persons should, both in summer and winter, wear flannel next the skin. 3. To be sparing of those wines and spirits (if used at all) exercising a marked diuretic effect either by their quantity or quality; select those which promote digestion without palpably affecting the urinary organs. A glass of hot gin and water, or a potent dose of sweet spirit of nitre, will not do anything to remove the residual urine behind an enlarged prostate. 4. To be tolerably constant in the quantity of fluids daily consumed. As we grow older our urinary organs become less capable of adapting themselves to extreme variations in excretion. Therefore it is desirable to keep to that average daily consumption of fluids which experience shows to be sufficient and necessary. How often has some festive occasion, where the average quantity of fluid daily consumed has been largely exceeded, led to the overdistention of a bladder long hovering between competency and incompetency. The retention thus occasioned by suspending the power of the bladder, has fre-

quently been the first direct step toward establishing a permanent, if not a fatal, condition of atony or paralysis of this organ. 5. It is important that from time to time the reaction of the urine should be noted. When it becomes alkaline or offensive, the use of the catheter may be necessary. When a catheter is required it is most important that its selection should not be left entirely to the instrument-maker. There are other points to be considered beyond the fact that it is to serve as an artificial outlet for the urine from the bladder. An unsuitable catheter in a prostatic case may do much permanent harm. 6. Some regularity as to the time of performing micturition should be inculcated. We recognize the importance of this in securing a regular and healthy action of the bowels, and though the conditions are not precisely analogous, yet a corresponding advantage will be derived from carrying out the same principle in regard to micturition.—*Medical Press and Circular.*

Amount of Sugar in Blood in Disease.

DR. N. P. TRINKLER recently read, before the Kharkoff Medical Society, a paper on the "Diagnostic Significance of the Quantity of Sugar and Reducing Substances in the Blood," in which he detailed a number of observations he had carried out on patients in Professor Grube's surgical clinic, the majority of whom were suffering from cancer (*The Lancet*). The blood of some was taken for examination during an operation, that of the rest being only obtained after death. The examination was in all cases made by means of two processes, that of Fehling and Soxhlet, and that of Knapp (Knapp's solution consists of cyanide of mercury dissolved in caustic alkali), the mean of the two results being taken. He found that the blood during life always contains less sugar than after death, and that that of persons suffering from cancer contains a larger proportion of sugar and reducing substances than that of healthy persons, or of persons suffering from other diseases. Affections of internal organs appeared to be accompanied by a greater percentage of sugar in the blood than diseases of the skin or of external parts. The degree of emaciation produced by cancer did not seem to have any direct effect upon the quantity of sugar in the blood. There did not seem to be any real correspondence between the amounts

of sugar and other reducing substances; the sugar was much more constant in its amount, the quantity of the other reducing substances being liable to very considerable variations. In the observations made on various diseased conditions, the following were the amounts of sugar found: Cancer, 0.1678 per cent. to 0.2037 per cent.; typhoid fever, 0.0950 per cent.; pneumonia, 0.0943 per cent.; dysentery, 0.0838 per cent.; organic diseases of the heart, 0.0737 per cent.; peritonitis, 0.701 per cent.; phthisis, 0.0653 per cent.; syphilis, 0.0553 per cent.; nephritis, 0.0489 per cent.; hæmaturia, 0.0375 per cent.

Sprains and Their Treatment.

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A SPRAIN is a wrench, or twist, of a joint. It may be—
1st. Simple contusion of synovial membrane and stretch of the soft parts.

2d. Rupture of the ligaments and synovial sack.

3d. Sprain fracture, or bone complication.

Under the first head may be classed those simple wrenches of the joints that are so common and which attract very little attention, but get well after a few days' rest and the application of domestic liniments. The gravest feature of such injuries is that they may predispose to subsequent accidents of a similar nature.

The second class of injuries are the most serious, and have for their sequels some of the gravest forms of joint troubles known to orthopedics. The violence necessary to produce this form of injury is variable, but ordinarily is not very great, and is generally produced in a very simple and unexpected manner. One may step down but a foot or two, and alight upon a round or turning object, and the foot turn to such a point as to lose the equilibrium, and in an instant the entire weight of the body is thrown upon the ligaments, already at great tension, and the result is a rupture of one or more of them.

This rupture may mean a simple tearing of one of the more tense ligaments, or it may mean the entire destruction of all support upon the affected side, and a rent into the

synovial sack, resulting in the escape of synovia into the surrounding structures as well as the entrance of more or less serum and blood from the injured blood vessels, external to the joint, into the joint cavity. This intermingling of serum, synovia, blood, etc., produces the severe chain of symptoms—of pain, swelling, etc.—so well known to all. The limitation of motion always present in sprains is due to the tension caused by the extra transfusion and effusion of liquids in and about the joint, and to the spasm of all muscles passing, or whose tendons pass, over the joint. This spasm may be partly voluntary, an effort upon the part of the patient to prevent pain, and partly involuntary, because of the reflex nervous disturbance always present in any form of joint injury or disease, making the muscular spasm almost constant.

This variety of sprain, if properly treated, early, may be of the most promising, but if neglected it is the beginning of untold agony. Under the most favorable course of treatment, they predispose to subsequent accidents, and under bad or neglectful treatment the trouble, at some time, is almost sure to be repeated, many times, it may be, and with increasing severity with each recurrence. The great pain associated with sprains is due, no doubt, to the pressure made upon the nerve terminals by the overdilatation of the joint bag, and effusion about the joint from the lacerated venules and arterioles involved.

Under the third head are found those more severe and less frequent complications of sprain, viz.: sprain fracture. This means that the ligament, that has been put upon the stretch, instead of giving way, has scaled the process to which it is attached from the bone. The size of this piece of bone is generally small, but may, as in cases of injury to the malleoli or radius, be of considerable size, as in a Barton's or Pott's fracture.

As complications or results of sprain we may have synovitis, and caries or necrosis. A sprain not only means that the ligamentous structures suffer, but that the synovial membrane also suffers contusion, and, indeed, I am inclined to think that the latter is the more important factor.

You know the laborer puts the light leather strap about his wrist to relieve pain. Do you think the pain would be relieved by pressure against torn ligaments? No. The real trouble in this case is a sub-acute synovitis, and the strap drawn snugly around the wrist tends to interpose

itself between the bones of the arm and carpus, and, in a measure, relieves intra-articular pressure, and this allows the membrane to rest.

In a great many of the joint troubles we are called upon to treat, the cause can be found to be a so-called sprain.

Joints that are predisposed to sprains are those illy protected, or are endowed with the greatest range of functional usefulness, as the wrist, ankle, knee and spine.

The treatment for sprains of the milder type is:—

Elevation, absolute rest, massage and rubefacients.

For more severe sprains it is:—

First, chloroform liniment; second, massage; third, fixation; fourth, massage; fifth, traction.

If the case is seen soon after the reception of the injury, nothing has given so much relief in my hands as chloroform, diluted in about six times as much water, arnica, etc., applied on absorbent cotton. This must not be continued too long, or it will blister. The patient will soon ask you to remove the cotton, which is evidence that it has been on long enough. When burning ceases, apply in the same way. This is enough chloroform. Massage immediately after a sprain, before and after the use of the chloroform liniment, is valuable, and should be practiced as much as possible. The joint should next have absolute rest, with elastic pressure. This is best done by applying about the joint four or five layers of cotton, or prepared wool, and over this a light plaster-of-Paris splint. If abundance of cotton is used, and the plaster applied snugly about the joint, the elasticity of the cotton will almost equal a Martin bandage in producing pressure, besides the added fixation. Some experience is necessary to know just how tight to make the plaster, and frequent observations are necessary to guard against too much pressure. The plaster bandage should extend from an inch above the toes to six inches above the ankle, in ankle cases. If the plaster should not be tight enough, you will not get the benefit of the pressure, and, if too tight, harm may be the result. Gerster claims that unnecessary pressure upon a joint will cause synovitis. The plaster splint should be allowed to remain on from five to ten days, and then removed.

Massage should now be used for a few hours, and if the joint does not appear to have done very well the splint should be reapplied, but it should be removed daily for an hour or so of the massage treatment. If this treatment is

faithfully carried out, a strong joint can almost always be promised.

The foregoing is more particularly true of ankle cases. In wrist cases a straight splint, eight to nine inches long and three inches wide, made of an ordinary cigar box, well padded with cotton, and bandaged snugly along the back of the wrist, will answer every purpose. Every wrist case, no matter how slight, if severe enough to come under your notice, is serious enough to demand this fixation. Other joints demand fixation by the use of plaster-of-Paris, or of some splint—as that of Levis, Ahl or Day, as may suit the fancy of the surgeon—but *fixation* for the first few days, or a week or so, is absolutely necessary to insure a good joint. At this juncture, I may say that fixation is dangerous if continued too long, for it has been known to cause a synovitis itself, by making pressure upon this membrane as its folds project from between the bones.

If, after a few weeks, the case appears to pass into a sub-acute synovitis, which is very often the case, a traction brace (already presented to the profession) should be applied. This form of brace relieves the weight of the body from the inflamed synovial membrane and the trouble is soon well.

To my mind the most important form of sprain is yet to be considered, viz.: spinal sprain. Erichsen's concussion of the spine, or railway spine, so ably opposed in Page's work upon the same subject, with the articles of Dr. Oppenheim, of Berlin; Dr. Tweedy, of Dublin; M. Grasset, of Montpellier; Dr. Jacob Wolff; Dr. P. D. Knapp, and others, embody the consideration of every conceivable phase of spinal injury and spinal neurosis with the chain of symptoms of functional paralysis, anesthesia, hyperesthesia at seat of injury, contractures, disturbance of the visual field, irritability, sleeplessness, disturbance of intellectual faculties, etc.

We too frequently are misled by what Erichsen has said upon this subject, and after one has received an injury we overlook the fact that, owing to the manner of reception of the same, it would be impossible to injure the spinal cord, because of its bony protection in the vertebra, thick, soft parts, and the arachnoidal fluid to ward off vibratory impulses so constantly imparted to the body. As a matter of fact, what would be near to us and the most likely part injured, is overlooked and no inquiry made into structures,

the symptoms of pathological disturbance of which are very obscure. These various writers have done a vast amount of irreparable damage to the profession and patient, and also to the corporations, in whose employ these patients are when injured. If we would look for more simple causes for these spinal pains, recoveries would be more prompt and these troublesome suits, in which doctors are subpoenaed and testify about things concerning which they know not, would be less frequent.

These concussions of the spine are nothing more nor less than a sprain of the spinal column, either in the intervertebral articulations, or articulations between the lateral processes, or even those between the ribs and vertebræ, with a contusion of the interposed synovial membrane, as is the case in other joints, a rupture of the joint bag, or ligaments that enter into the formation of the spinal column, so numerous and complex.

A differential diagnosis between true traumatic neurosis of the cord, so-called "lumbago," synovitis and sprain is generally very easily made.

Ten drops of F. E. gelsemium every four hours will almost invariably cure lumbago.

After having obtained a history of a blow, wrench, misstep, jump, etc., at which time slight pain or soreness was experienced at some point along the spine, we may next learn what influence shifting or movements of the body have upon the tender point.

The theory that pain in the region of the spine while lying down indicates anemia of the cord, and pain while the body is perpendicular indicates congestion of the same, may be true, but ordinarily these very conditions are very valuable signs in making out a diagnosis of spinal sprain.

An observed fact that traction made upon a joint in a state of inflammation relieves the existing pain, is just as true of the spinal articulations as of joints of the extremities.

Another valuable method of determining the nature of the trouble is to ask your patient to walk across an uncarpeted floor on his heels. If a vertebral synovitis exists, he will soon tell you that he can not do things that jar the body. Observe how carefully he walks, as the saying goes, "as though he was walking on eggs."

You can almost positively tell what the trouble is in these cases as soon as your patient steps in your office.

Lie the patient on an operating-table, with an assistant to support the feet; grasp the head of the patient and make sufficient traction to overcome the rigidity of the spinal muscles. The patient here, as in any form of interarticular congestion, will experience relief, while traction is made. The latter procedure can be practiced as successfully by standing behind the patient in the erect posture and putting your hands in the armpits, lifting the trunk's weight from the pelvis, and again the patient will experience relief.

Next tap firmly upon the top of the head and shoulders, and if the trouble under consideration be present, the jarring will perceptibly increase the local distress.

Not infrequently have I observed the trouble apparently localized in a lateral articulation. This can be determined by swaying the body from side to side. The body bent toward the trouble will increase it, and from it will relieve the pain or distress.

The treatment for railway spine, produced, as Erichsen says, by sudden twists or jerks, as would be the case in railway collisions, is the early application of a plaster-of-Paris or leather support.

This should be done at once, or just as soon as material can be obtained for the purpose, and allowed to remain a week or two, or as long as the case appears to demand the support. Of course, the Sayre tripod should be used in applying the jacket.

If this treatment be faithfully carried out, suits against corporations for damages by parties suffering with so-called spinal concussions will be less frequent, and weak backs, backaches, lumbago, etc., will be less frequently heard of.
—*Columbus Medical Journal*.

Case of Angina Pectoris.

SUPPOSED to be caused by depressed fracture of skull year ago. White man, ætat thirty; height, six feet two inches; weight, 205 pounds; very muscular; occupation, striker in a blacksmith's shop. Prior to 1884 (when he received the injury to his head) he had not seen a day's sickness in his life. This injury left him with a depression on the left side of his head, on a level with the top of, and one inch posterior to the margin of ear, and one and one-quarter inches from tip of mastoid process. The depression meas-

ures one inch from upper to lower margin, and one and one-half inches from anterior to posterior margins. He was confined to his bed for eight months after receipt of injury. After he was able to go about he had an attack of angina pectoris, and has had as many as three a week since that time. Sometimes he will not have one for a month, when they return with increased severity. He has been treated by a number of physicians, without relief. He has had more attacks, and they have been much more severe since he had "la grippe," last March. Heart sounds normal, but a little weaker than seemed in keeping with his fine physique and general strength. He has some dyspeptic symptoms, for which elixir lactopeptine was prescribed with benefit. The patient notices that when he gets very warm, and especially when he lowers his head in stooping, that it gives him pain in the back of the head just above the neck, and he will become unconscious unless the upright position is immediately resumed. Dr. Baker asked as to the advisable use of amyle nitrite for the anginal attacks. Is the angina due to the blow on the head, which may have fractured the inner table of the skull? and does irritation of that portion of brain so interfere with the action of pneumogastric nerve as to cause the heart trouble? Could trephining over the depressed bone relieve both the angina and head symptoms? The patient has been repeatedly told by physicians that the wound is too low down to be operated on. He is now taking sodium bromide, compound spirits ether, and aromatic spirits ammonia three times daily, and every two hours when threatened with attack. Dr. B. further said that the attacks were not more frequent in the recumbent position or at night. Mind clear. Thinks there is chronic congestion or inflammation about brain.

Dr. Parker thinks it a clear case for an operation.

Dr. Upshur saw a case that, in regard to the epilepsy, was similar to Dr. Baker's. The skin over the temple was cut by a falling timber; no ascertainable depression. Epileptic attacks, two or more daily, soon followed, dulling mental action. He was trephined, and upon the inner table or button of bone being removed, there was a deposit of calculus, indicating that there had been fracture. No convulsions for weeks succeeded, but then he fell forward on his face, dead. Another case, an inmate of Central Lunatic Asylum, was struck on head with an axe, in 1862, and a piece of bone driven on the brain; became violently in-

sane, but had no epileptic convulsions. He was trephined by Dr. Hunter McGuire, in 1869. He became rational upon recovery from operation, and took up the thread of events from the time he was struck, the intervening period being a blank. Subsequently died of cerebritis.

Dr. Hugh M. Taylor had, recently, a case somewhat similar to that cited by Dr. Baker. A railroad employe received an injury in same region of the head, remaining unconscious for thirty-six hours thereafter, when the mind cleared; no fracture of skull could be diagnosed. He suffered pain over the frontal region, left eye was blood-shot and protruded—evidently, some cerebral lesion. He continued this way for two or three weeks. In six weeks he began suffering from vertigo, increased pain, and depression of cerebral functions, amounting almost to coma. This was followed by discharge of pus from the ear and “Cheyne-Stokes” respiration. Diagnosed *abscess of brain*, probably due to depression. After consultation with Dr. C. W. P. Brock, he decided to trephine, but patient died the night before day selected for operation. He is satisfied he should have trephined.—*Virginia Medical Monthly*.

The Use of Hypodermic Injections of Caffeine in the Treatment of Post-partum Hemorrhage.

DR. MISRACHI highly recommends the use of injections of caffeine in cases of post-partum hemorrhages where rapid assistance is necessary, and especially when the physician first reaches the cases after there has been already considerable hemorrhage. Especially in country practice this remedy may be of great value, particularly as it is possible for the physician to have under his care cases of diphtheria or erysipelas, and to have been unable to produce such complete disinfection as would warrant the insertion of the hand. According to the author, caffeine acts more rapidly than ergot, and produces a more effective result even than ether, although the latter is a more rapid stimulant. He administered it in the form of a solution, of which a hypodermic syringe would contain four grains of caffeine, and gave three or four injections at once—in other words, injects hypodermically about sixteen grains of caffeine. He employs caffeine rendered soluble by the benzoate of sodium, equal parts of each being dissolved in warm water. The

author claims that this remedy so employed produces most remarkable results in arresting bleeding and in acting as a stimulant, and that, therefore, benzoate of sodium and caffeine in small packets should always be carried by country practitioners.—*Therapeutic Gazette*.

Purpura Rheumatica Hemorrhagica.

AMONG the very instructive records of the *Transactions of the Association of American Physicians*, 1890, is a discussion of a case of the above disease which was exhibited to the society by Dr. Prentiss.

The patient, a previously healthy boy of thirteen years, was first affected in March, 1889, with swelling of all the joints, very severe pain, located chiefly in the knees and ankles (and also in the stomach, attended by vomiting), and a purpuric eruption over the whole body. The attack seemed to be due to prolonged and continuous exposure to hunger, cold and rain. On simple nutritious diet he recovered in two weeks.

In September of the same year, after exposure to scarlatina, he had a similar attack, except that the swelling and eruption were confined to the right half of the body. He was treated with acids, iron and quinine, with morphia for pain, and the acute trouble passed away.

In November, 1889, a notable attack occurred, with hemorrhages, slight fever, delirium, dyspnoea and conjunctivitis. The hemorrhages were from the bowels and the bladder, and also into the skin.

Up to May, 1890, when he was presented to the society, he had relapses every four or six weeks, milder than the earlier attacks. In the interval between the attacks he was fairly comfortable and free from pain, but not perfectly well. The purpuric spots had never been absent since the first attack. The urine was frequently examined and found normal, except that it contained blood at times, and that on a single occasion there was diminution in quantity, with abundance of albumin—indicating acute nephritis. The blood was examined by a competent microscopist, but no important change was detected in it.

A feature of especial interest in the case was connected with the hemorrhage into the skin—the blood being poured out apparently between the epidermis and the corium—

producing gangrene of the skin. The most remarkable of the patches were upon the abdomen, where, at each side of the navel, an ecchymosis of the size of the palm of the hand appeared and became complete in half an hour, the parts being from the beginning black and painless with true gangrene. In a few days a line of demarcation formed, and the dead tissues sloughed, leaving a granulating surface which healed with a scar. The boy had a tight phimosi, but ecchymosis with sloughing on the penis saved the trouble of circumcision.

Arsenic seemed to have done the most good to the patient, with salol for the rheumatic symptoms.

In the discussion of the case, the fact was brought out that gangrene is a rare occurrence in this disease. The nature of the changes which give rise to the ecchymosis received considerable attention. According to the observations of the members of the society, purpura, whether of the simple or of the more severe and hemorrhagic forms, is essentially the same. It may be associated with rheumatic or with nervous disturbances. The cause of the effusion of blood appears to lie, not in any change in the blood, but in abnormal conditions of the walls of the blood-vessels. If so, the treatment should be directed, especially in chronic cases, to the restoration of the walls of the vessels to their normal condition, and tissue-builders should be given, such as arsenic or phosphorus. To a boy of the patient's age, the latter might be administered in the dose of $\frac{1}{100}$ grain t.i.d. in some simple oil, for several months. (A German author has asserted that he has found a peculiar bacillus in the walls of the blood-vessels in this disease.) Further examination of the patient showed that there was no disease of the heart and no enlargement of the liver, but that in all probability a subacute peritonitis—the result, perhaps, of an effusion of blood into the peritoneal membrane—was present. For this, rest in bed and cold applications were recommended.—*Medical Record.*

A ROYAL TEETOTALER.—The King of Samoa is determined that his subjects shall be sober, if they are not free. He has just issued a proclamation to the following effect: "No spirituous liquors, vinous or fermented liquors, or intoxicating drinks whatever, shall be sold, given or offered to be bought or bartered by any native Samoan, or Pacific Islander resident in Samoa, to be taken as a beverage." Any breach of this law is to be visited with heavy penalties.

Proceedings of Societies.

St. Louis Medical Society.

Reported for the CINCINNATI MEDICAL NEWS.

STATED meeting Saturday evening, January 24, 1891, the Vice-President, Dr. J. C. Mulhall, M.D., in the chair.

Dr. Y. H. Bond presented a specimen of

ECTOPIC PREGNANCY.

He did not wish to report a case of mere ectopic pregnancy, since he did not see the patient from whom this specimen was obtained during life. She bled to death, and presented the usual symptoms incident to a lesion of this character; the diagnosis was not made.

On post-mortem the abdominal cavity was found filled with clotted blood, proceeding from a rupture of the right Fallopian tube, as was then discovered.

With great confidence, Dr. Bond pronounced this a case of ruptured tubal pregnancy; for whilst no fœtus was found (none being sought for), the gross appearance of the parts justified him in excluding all other lesions to which the tubes are liable. Nothing here was found to sustain the belief that inflammatory disturbances which, in rare instances, attack the tubes or the neoplasm, could produce the pathological appearances present. Extravasation of blood into the tubes, with subsequent rupture into the abdominal cavity, in consequence of distention of the tube, and unassociated with extensive inflammatory alterations of the walls of the tube, rarely, if ever, occur; therefore, there was no question but that the specimen is that of a ruptured tubal pregnancy. It will be submitted to Prof. Summa for microscopic examination, and there is no doubt that histological appearances will be found that will demonstrate the existence of placental tissue at the point of rupture, and that the uterine cavity is lined with a decidua vera, and perhaps villi or decidua cells. Here are seen the uterus, together with both broad ligaments and ovaries. The uterus is three times as large as the normal unimpregnated uterus, and from its size the doctor predicted there would be found evidences of chronic metritis, associated with an increased development of the muscular element, the latter being incident to the innervation of pregnancy.

The speaker believed the uterus to be much larger than is usually the case at that stage of extra-uterine pregnancy, being perhaps six weeks. The ovaries, too, are quite large. No evidences of a corpus luteum of pregnancy can be detected. Small cicatrices are seen, the sequelæ, perhaps, of ruptured follicles, but nothing pathognomonic of a corpus luteum of pregnancy. In 1881 Mr. Tait stated that evidence was rapidly accumulating in his hands that "corpora lutea are not a *necessary* result of the maturation and shedding of true ova"; and in 1889 he reiterates the same assertion. The determination of the truth in this regard may possess an important medico-logical bearing, and no case that may come before us that can throw light upon this subject should escape our scrutiny. Perusal of nine-tenths of all that has been written upon the subject of ectopic pregnancy will impress one with the belief that ectopic gestation is a veritable curiosity—a case of nature let loose, without restraining or guiding influences, that should act with any degree of uniformity in determining the steps of her aberrant course. And as a consequence it was for a long time thought to be idle to attempt to establish anything like a defined line of action, in dealing with a process so eccentric. And thus is explained the fact, that century after century rolled on, and no intelligent method of combating the deadly agency of this process was discovered. Countless thousands of women have gone to their graves prematurely, because no Tait had arisen to unravel the mysteries of ectopic gestation, and point out a sure and reliable method of dealing with the same.

Although the propriety of performing laparotomy, tying off the vessels, and removing the gestation-sac, had been by many suggested, it was not until 1883 that a man appeared who had sufficient courage of his convictions upon the subject to put his conceptions into actual practice. In 1873 Tait formulated certain conclusions respecting ectopic pregnancy, and so far as had come to his knowledge all carefully conducted observations upon the subject since then have served to establish their correctness.

He claims that all ectopic pregnancies are primarily tubal, unless, perchance, there should be an ovarian variety, which, as yet, has not been proved. Clinically, two kinds of tubal pregnancy are met with, viz.: the one occurring in the free portion of the tube, and the other in that portion of the tube embraced in uterine tissue, the old interstitial form.

In explaining the cause of Fallopian pregnancy, he refers to the similar states found in the mucous surface of the uterus after menstruation, and that of the tubes in desquamative salpingitis.

Menstruation is regarded as a nidation process, a state in which the epithelial layer of the mucous membrane of the uterus has been thrown off, thus fitting the cavity for the retention and nutrition of the fecundated ovum during the period of its early existence, and the formation of the placenta subsequently.

The cilia of the healthy tube, acting in a direction toward the uterus, assist in conducting the ovum to the uterine cavity, and at the same time hinder the ingress of spermatozoa.

A result of desquamative salpingitis is to remove the cilia and place the mucous surface in a vascular state similar to that of the uterus after menstruation, as regards its power to furnish nutrition to the ovum in its early life. The conditions for the formation of the placenta are not limited to uterine tissue, even though the Fallopian tubes be regarded as a part of the uterus.

When we reflect that the placenta is a product of the chorion, and that the latter is the property of the ovum, we can understand how the inherent forces of the fecundated ovum will take on activity, if the requisite warmth, moisture and nutritive elements are at hand.

In confirmation of the desquamative theory, Parry says "women who have become pregnant outside of the uterine cavity often show a previous inaptitude for conception, the interval between marriage and the first impregnation being frequently very long."

If the woman has borne children, a period of sterility frequently precedes the extra-uterine pregnancy. The fact that the woman has been sterile points to the conclusion that there has been Fallopian trouble. The recent observations of Forman, read at the meeting of the "American Association of Obstetricians and Gynecologists," serve to confirm the theory of Tait as to the influence of desquamative salpingitis in occasioning extra-uterine pregnancy.

If it be conceded that impregnation usually takes place in the tube, we thence derive an argument against the theory that desquamative salpingitis played an important role in causing Fallopian pregnancy. It will be remembered that in the latter part of the last century and the early part

of this, it was believed that the spermatozoa passed along the Fallopian tube, reached the ovum and conception took place at the ovary, and that the impregnated ovum retraced its steps and entered the cavity of the uterus.

Experiments on lower mammals show that the spermatozoa are usually found high up in the cornua of the bipartite uteri (the cornua erroneously supposed to be Fallopian tubes). Fallopian tubes only exist in the higher order of animals, those that have assumed the upright position. That is the position advanced by Mr. Tait.

The observations of Parry and Forman, as regards the association of sterility and extra-uterine pregnancy, will find general confirmation. The very first case of extra-uterine pregnancy of which we have any history was furnished in 1594, when a Dr. Primrose operated successfully, and saved both mother and child. That case was preceded by the occurrence of extra-uterine pregnancy, a dead child having been removed several years before by the same surgeon through a large aperture in the abdominal parietes in consequence of necrosis of the part.

To understand the pathology and course of ectopic pregnancy, consider the anatomy of the parts. Suppose (illustrating) my handkerchief as it folds over this pencil to represent the broad ligament and this pencil the Fallopian tube. An ovarian pregnancy may possibly occur, but it has not been conclusively shown. In consonance with this view, it was believed that many cases of extra-uterine pregnancy were really cases of ovarian pregnancy. Many pathological specimens are found in museums labeled "ovarian pregnancies," and the appearances furnished by a Fallopian pregnancy when the gestation sac has not been ruptured, are very suggestive of an ovarian form. But a close examination of these specimens serves to demonstrate that very few, if any, are ovarian pregnancies. Possibly some of them are ovarian, and that we might expect; we have cysts formed in the fimbriated portion of both Fallopian tube and ovary; both play a part in their formation; and it is reasonable to suppose that in certain instances the fimbriated extremity of the Fallopian tube, in consequence of inflammatory action, would become adherent to the ovary and the spermatozoa be carried down to the ovary, and impregnation there take place. In that case we would have a combined form of ovarian and Fallopian pregnancy. In

one portion of the gestation-sac we would have ovarian tissue and in the other the tissue of the Fallopian tube. In order to prove that any case is strictly one of ovarian pregnancy, it would be necessary that the Fallopian tube should be intact (normal), the uterus should be intact and at least one ovary thoroughly intact; and whilst the other ovary might not be present, to demonstrate conclusively that it was an ovarian pregnancy, ovarian stroma should be found throughout the cyst wall of the pregnancy. The speaker did not know a single case recorded in which ovarian tissue had been found throughout the cyst wall.

Tubal form of pregnancy.—Mr. Tait claims that all pregnancies are primarily tubal, taking place in the free portion of the tube. It is only exceptionally the case that impregnation takes place in the tube during its passage to the uterus. When, however, tubal pregnancy occurs, the fecundated ovum will be accommodated in the Fallopian tube only for a short time; the tube will be ruptured; at least we may expect a rupture of the Fallopian tube at some time before the expiration of the fourth week. A rupture will take place at the upper portion of the tube where the layers of the broad ligament fall over it as a curtain, and opening directly into the peritoneal cavity; we will have as a result, death from hemorrhage or septic peritonitis. In the vast majority of cases death occurs very promptly, usually in time ranging from a few hours to a few days. The patient may die from hemorrhage in its primary stage—from the first gush of the hemorrhage; and continuing until the woman perishes. It may be stayed for a time by a clot and then recur. As a rule, death ensues immediately because there is no influence to arrest the hemorrhage. The parts being exceedingly vascular at the point where the hemorrhage occurs, a large quantity of blood is poured into the peritoneal cavity. By its presence peristalsis is excited; the patient in consequence of her suffering is restless; can not be kept still; therefore, the conditions requisite to the coagulation of blood can not be complied with.

When rupture occurs at the lower portion of the tube, we have a sub-peritoneal pregnancy, and there ensues one of five results:

1. The fœtus may live and reach a viable period.
2. It may be converted into a lithopædian.
3. It may perish and be absorbed as an hæmatoma.

4. It may undergo suppuration and be discharged through the bowel, vagina, the bladder or abdominal wall at or near the umbilicus.

5. It may develop up to a certain point and then rupture into the peritoneal cavity, constituting what is known and designated as a secondary rupture. This secondary rupture may cause death, or the foetus may be extruded into the abdominal cavity without amnion charion or decidua to invest it. Cases are reported in which the foetus has been in the abdominal cavity, surrounded by the intestines, with no covering at all; but in such instances the placenta was found in general attached sub-peritoneally, and the presumption is strong that the pregnancy had proceeded up to perhaps the seventh or eighth month, and then a portion of the broad ligament had given way and the foetus was emptied into the free peritoneal cavity. That the peritoneal secretion does exercise a decided digestive influence upon soft structures can not be questioned, since Mr. Tait reports he has operated forty times and yet he only found about twelve foetuses; but he found placental tissue in every case; the foetus had been absorbed, digested by the peritoneal secretion.

Nor is the rupture of the Fallopian tube due to distension. At the point where the placenta happens to grow, if from the upper wall of the tube, it will penetrate the true tissue of the tube in the form of venous channels, the placental tissue becoming constantly thinner, a rupture will finally take place as a consequence, and then of necessity alarming hemorrhage takes place.

If the pregnancy should be developed at the lower portion of the tube, in the direction of the broad ligament, a rupture will take place by the same processes in that direction, and then are presented either of the five conditions enumerated.

It surely is a decided desideratum to be able to diagnose extra-uterine pregnancy—tubal pregnancy, before rupture. Were we thus endowed and the proper course pursued many lives would be saved. Should the patient consult us about her condition previous to the time of rupture, and we be induced to make a physical examination, the speaker thought the testimony of the physical signs considered in connection with the subjective symptoms, in the vast majority of cases, would amply justify the presumption of extra-uterine pregnancy; in fact, a presumption so strong

that the neglect to make an exploratory laparotomy would be inexcusable. Suppose a case: A woman gives the history of sterility, a condition not the consequence of her choice; has been regular in her menstruation, and yet a few weeks previously she had missed a menstrual period; had passed a week, ten days or two weeks or more; then menstruation returned, profuse and regular; she had pain in the region of the Fallopian tube; her attention is directed to that region by the sense of discomfort, and recurring attacks of pain; her breasts are enlarged; suffers from nausea; and may or may not present those subjective indications of pregnancy that exist when the pregnancy occurs in the uterus. In addition, there is discoloration of the vagina, especially that portion of it in proximity, or adjacent, to the urethra; the cervix is soft, and the uterus continues to develop up to about the first or second month; and in addition, we have in the region of the Fallopian tube, upon the side of the uterus or posteriorly to it, a mass corresponding in size to that of a normal pregnancy at that period. This combination of symptoms would furnish strong presumptive evidence of pregnancy; especially if, after one examination had been made and the size of the mass definitely ascertained, a subsequent examination should reveal a decided increase in size, then the conclusion would be almost inevitable. In a case of hydro-salpinx the outline of the tumor, in a case of pyo-salpinx the increased sensibility, will assist in reaching a satisfactory conclusion. Diagnoses of tubal pregnancy before ruptures have been made, and appropriate operations performed; and when this sequence of symptoms is present our minds should be on the *qui vive* for the possibility of such a condition of things. The diagnosis of tubal pregnancy at the time of rupture is almost unequivocal, no excuse could hardly ever be claimed for failing to diagnose it, and to invoke promptly the one only surgical interposition that can rescue from impending death. The woman, as a rule, is taken suddenly ill; complains of pain in the pelvic region; at once becomes collapsed; is faint; almost pulseless; cries for water, the demand being like that of the wounded soldier when profusely bleeding; her anæmic state indicates conclusively that she is suffering from loss of blood, and if there is no palpable explanation for it elsewhere, it is imperative that her surgeon open the abdomen and ascertain that she is not bleeding from a ruptured Fallopian tube.

In respect to a diagnosis of a rupture of the tube into the broad ligament: The subjective symptoms render less assistance than in the case of rupture into the abdominal cavity, but the physical indications are more positive. The woman suffers from collapse to a degree corresponding to the amount of blood effused. In some it is very great; even to the separation of the broad ligament and the formation of a virtual stricture around the rectum, and thus obstruct the passage of the fæces. In such cases the degree of systemic disturbances would be very pronounced. If the symptomatic history of the extra-uterine pregnancy be considered together with the sudden occurrence of collapse, the finger introduced into the vagina detecting a hæmatoma, of concave form below, and sufficiently large to fill the pelvic inlet being convex above, the conclusion is almost absolutely convincing that the case is one of ruptured tubal pregnancy into the broad ligament. If the rupture has thus taken place, and the child continues to live, it will be impossible to diagnose the existence of a viable child until after the expiration of the fourth month. After this period the heart sound and ouffle will afford sufficient data to determine the existence of a living child. In case of the death of the child and partial absorption of the gestation-mass at or near full term, there ensues a process of spurious labor. Women sometimes are in labor for several days, exhibit symptoms that simulate those of true labor, but the cervix is not drawn up as it is in labor at the full period. After the cessation of labor pains, the mass promptly becomes reduced in size, the amniotic fluid undergoes absorption—the amnion closely invests the child, and the process of digestion is rapidly instituted. The rapid reduction in size, apart from the absence of motion, is one of the strongest evidences that the child has perished.

Interstitial pregnancy.—It is impossible to diagnose this condition either by physical or subjective symptoms on account of the many and conflicting conditions that exist. These cases usually rupture into the peritoneal cavity at a time varying from three to twenty weeks. If it were possible to diagnosticate a case of interstitial pregnancy, one mode of treatment only is indicated, viz.: Parry's operation.

Primary rupture into the abdominal cavity.—This demands a laparotomy promptly; the bleeding portion of the broad ligament, in which the sac is situated, must be ligated and removed. The result in such cases is usually a

very happy one. Mr. Tait reports thirty-eight cases with only one death; Martin reports eleven cases, with three deaths; therefore, in view of the fearful mortality that existed previous to the institution of this method of treatment, there no longer exists any question of the propriety of this procedure.

Rupture into the broad ligament.—In cases of this kind, the foetus being dead, a hematoma is formed; if it be moderate in quantity, the question arises as to the advisability of attempting its removal, surgically, or to leave it to nature to remove it by absorption. Some contend that an operation is the proper thing; others deny that laparotomy and the opening of the broad ligament, cleaning out the collection of blood, is the best surgery. If the condition of the patient seems not to be serious, and the collection of blood not unduly large, the speaker said he would be disposed to leave it to be absorbed; for hæmatomata are not of very uncommon occurrence; and it is known that they do undergo absorption. Nothing is more common than a metastasis—a discharge of blood after operation on the broad ligament for the removal of an ovarian cyst, and yet rarely do we have an unpleasant result. As a rule, therefore, no operative measure is called for, as this mass of blood will be absorbed. It has been contended, however, that in all cases of hæmatoma complicated with extra-uterine pregnancy, a laparotomy or an operation on the broad ligament through the vagina should be practiced, for the reason that in such cases sepsis sooner or later attacks the effused blood, upon the assumption that the desquamative salpingitis was due to a septic condition, and that the septic germs still existing in the Fallopian tube would, in the course of six months, infect the blood poured out into the broad ligament. As a matter of course, if the discharge of blood into the broad ligament was of such extent as to endanger the life of the patient or render it almost certain that suppuration would ensue, the wise course would be to perform a laparotomy, open the broad ligament, cleanse it thoroughly (and, if necessary, use some syptic application) and stitch the divided portion of the broad ligament to the abdominal opening, and, if possible, insert a drainage tube.

What line of action shall be adopted when extra-uterine pregnancy is diagnosed at the fourth month or thereafter, the foetus being alive but not viable? Shall efforts be made to destroy the child by electricity, by the injection of

morphine or by other means, or shall we by a laparotomy remove it at once; or wait till it reaches a viable period, and then attempt to save both mother and child?

Should such a case be diagnosed as early as the fourth month, an attempt for its removal should be made before the interests of the mother become very seriously compromised, for the smaller the placenta the less the danger; the greater also the possibility of tying off the vessels and greater likelihood of saving the mother. But if the child was near the viable period, the speaker would wait until it reached the full period; but if it was detected near the fourth month, then the foetus should be sacrificed and removed in order to save the life of the mother.

Martin, of Chicago, has recently experimented with the view of determining the comparative potency of the Faradic current and galvanic current in destroying eggs in the process of incubation, and has awarded it to the latter.

In regard to the destruction of the child, statistics show that in 1888 and 1889 eleven cases were operated on in which the children were viable; four mothers died, and four children were saved, making a mortality of thirty-six per cent. In operations performed from six to eight weeks after the death of the foetus, of forty-four cases reported in 1888 and 1889, there were nine deaths, a mortality of twenty per cent.

These are vastly more favorable results than were obtained in the time of Parry, who says in 1873, "of nine women operated on during foetal life, or soon after its extinction, they all died." The clamp then was in use, and no antiseptic precautions were then employed. Consequently, causes of mortality then prevailed that do not exist at the present day.

Operation of laparotomy, removal of the child.—Mr. Tait recommends that the placenta be left intact, that the umbilical cord should be tied low down, and that an effort should be made to excise the amniotic cavity in which the child had been contained; and that the abdominal incision should be made not in the median line, the conception being below the broad ligament, and as the gestation-sac increases in size the broad ligament is carried up; consequently, the incision is made to the right or to the left of the median line, as the case may require; if the child is upon the right side, the incision should be to the right of the median line, and *vice versa*. By that means it is sought to avoid enter-

ing the peritoneal cavity at all. The sac, after thorough ablation, is sewed to the opening in the abdominal wall. Mr. Tait has operated upon seven cases and has succeeded in saving three women.

Attempts have been made to remove the viable child through the vagina, but the results have been unfortunate. The speaker knew of but one case in which a living child has been thus removed, the reason assigned being that the circulation is so seriously interfered with during the extraction of the child that it is dead before delivery is accomplished; laparotomy, therefore, furnishes a much more promising mode of operation in these cases than an effort to extract per vaginam.

If the child, however, has developed in the broad ligament, and a rupture, with hemorrhage, has taken place secondarily from the broad ligament into the peritoneal cavity, and the symptoms are sufficiently grave, then it would be imperative to do a laparotomy, ligating the vessels below the placenta, if possible, and remove the placenta also.

In a case of suppurating ovum, the mass not being large, and it being possible to reach it readily from the vagina, its removal in that direction is advised; but if the mass be large and there be complicating conditions resulting from inflammatory states, a laparotomy is advised, and the removal of the suppurating contents through the abdomen, and then attach the cyst wall to the opening made in the abdomen, using drainage also. Ten cases have been reported in which, after one extra-uterine pregnancy, a like pregnancy has occurred upon the other side. The question very naturally presents itself whether or not in such cases the removal of the appendages of both sides is indicated.

Dr. W. H. Ford said about fourteen or fifteen months ago he called the attention of the society to this subject, giving the views of —, of Dublin, by whom all the points narrated were discussed, six or eight months before Tait's book appeared. The speaker strongly inclined to believe with Dr. Bond that the diagnosis of ectopic pregnancy was possible, even before the rupture of the tube. The diagnosis is certainly a very difficult matter, and in some cases almost impossible; yet a combination of symptoms is presented which would lead to the knowledge that something quite out of the usual character of inflammation and of

pelvic troubles was present, though the usual associated loss of blood from the uterus may have ceased.

He thought the diagnosis of a rupture is not so readily made, as the expressions of Dr. Bond would lead us to believe, in the majority of cases. One of the forms of disease which most closely simulates a rupture of the tube, or perhaps of the broad ligament after having been distended by a foetus, is that of pelvic hæmatocele. The woman is bleeding intra-peritoneally, is in a state of collapse, suffers from sudden and acute pain, and reports irregularities of previous menstrual periods. He stated he had been able to arrive at a correct diagnosis from the condition of the pelvic contents. Some of the ordinary features of pregnancy were present, a round shaped swelling in the pelvis surrounding the uterus, and pain and other symptoms which had occurred in a milder form on one or two menstrual occasions previously, not immediately preceding, however. On the occasions cited these symptoms were greatly aggravated, and the woman nearly died; but the patient finally recovered; the case proved to be a pelvic hæmatocele.

Ectopic gestation having been diagnosed sub-peritoneal, active interference should not be made until the time for normal labor. During labor the child is generally destroyed in consequence of the changes which take place.

The speaker reported a case in which a diagnosis was made at the eighth month, muscular movements being perceived and the foetal heart detected, and it was advised and determined to let the woman alone until the ninth month. Labor did come on at full time, and the diagnosis was confirmed; the child died during labor; the uterus was found thrown strongly into the cervix in front (quite accessible to the finger), and had become again hard, and there was considerable hemorrhage from the uterus. Delay of two or three months was advised until the child and the placental tissue should become absorbed. There is obviously an advantage in operating to the side of, instead of in, the median line, for thereby cutting into the peritoneum is avoided, the foetus being generally developed behind the uterus.

The whole subject has been wonderfully developed by Dr. Tait's perspicacity, and he has negatived the idea of peritoneal inflammation; for that which was supposed to be a peritoneal sac is now known to be nothing more than

a peritoneal pelvic floor; and it is not true, as Cazeau remarks, that "although you may think it is the pelvic floor, if it is cut open, real pelvic peritoneum will be found beneath the child."

Dr. Frank Glasgow said he had seen two cases certainly of extra-uterine pregnancy, and one possibly of interstitial; that Dr. Carson had presented one case to the society in which the patient recovered; that he had operated in a case of broad ligament pregnancy that progressed four months and a half; the foetus then died, and was afterward carried for three years and a half. The speaker said he had diagnosed another case as probably of tubal pregnancy close up to the uterus; that patient disappeared until after the delivery of the child, and when seen four months afterward she was suffering with septic peritonitis.

Another patient had come under his charge only a short time ago; a young girl, unmarried, experienced a sudden, sharp pain in the abdomen and fainted, from all appearances, from loss of blood; her pulse was very weak and rapid; she became perfectly white and remained so; her catamenia were regular, and she denied all possibility of pregnancy, but would not submit to an examination.

Dr. Glasgow thought the profession generally were in accord with Dr. Ford, that such cases should be let alone and allowed to go on as long as they would; if the foetus dies, becomes encapsulated, it can then be operated on; if it causes a tumor, it can be operated on later.

Gleanings.

HOW IT FEELS TO BE KILLED BY ELECTRICITY.—Now that so many of our citizens are getting shocked from the numerous "dead" wires which ever and anon fall gently and unexpectedly on their heads as they walk the streets, it may be well to know what sensations may be expected under such circumstances. They are thus described by a lineman who was recently caught in the wires on Chestnut Street:

"I climbed up the pole on the corner of Fourth and Chestnut to untangle a Western Union wire from another wire (a fire-alarm wire, I think it was) that had fallen across it. I reached the top of the pole and threw my leg over one of the cross-trees, and took hold of the Western Union

wire to shake the other off. As I did so I felt my hands close around the wire like a vise and a shock pass through me that deprived me of strength and sight, but left me conscious to the worst agonies I ever dreamed it possible for a man to endure. I couldn't let go of the wire, and so, with my leg over the cross-tree, my hands clutching the telegraph wire and my body lying across a guide wire, upon which I had fallen, I hung until my friends came to my assistance and let me down. I was only there a few minutes, they told me, but it seemed to me to be hours. I could feel myself vibrating in every fiber, and the buzz of a dynamo sounded in my ears as plainly as though I was standing beside one. Every drop of blood in my veins seemed to be churning, and the agony of the sensation was beyond description. I am now feeling very weak, and my bones ache, as though I had been beaten with a club."—*Weekly Medical Review*.

A NEW CURE FOR SPASM OF THE GLOTTIS.—Spasm of the glottis is notoriously a very alarming condition, and one which it is often as difficult to relieve as the symptoms are urgent. Sir Morell Mackenzie gives a good "tip," and one worth remembering. The spasm is the result of a reflex, the starting-point of which varies in different cases, and he has found, as the result of experience, that a pinch of snuff, judiciously sniffed up the nostrils, will, by causing another and violent reflex, cause the former to subside.—*Med. Record*.

GUIAC AS A LAXATIVE.—Dr. Murrell has employed resin of guiac in 10-grain doses as a purgative, with excellent results. The amount named is rubbed up into a confection with one drachm of honey, and this he has employed with excellent results, not only as a purgative, but in the treatment of rheumatism, sciatica, tonsillitis, dysmenorrhœa, and other affections. It is supposed that if the drug were triturated with cream of tartar or sugar of milk, it would be just as efficacious in smaller doses. It acts as a purgative or laxative, according to the size of the dose.

SAMPLES of Sander & Sons' Eucalypti Extract (Eucalyptol), gratis, through Dr. Sander, Dillon, Iowa. Eucalyptol stands foremost as a disinfectant, is a perfect check to inflammatory action and invaluable in zymotic diseases. Meyer Brothers Drug Company, St. Louis, Mo., sole agents.

FOR NEUROTIC INCONTINENCE OF FECES.—Take of:

Strychnine crystals,	gr. xvj.
Acetic acid, dilute,	℥iv.
Alcohol,	℥iv.
Tr. cardamom comp,	℥j.
Water to make,	℥xvj.

M.—S. Take ten to twenty minims with an equal amount of fl. ext. ergot after each meal.

Before retiring I had him cleanse the lower bowels with a hot decoction of *hydrastis canadensis*. The strychnine was given as a nerve tonic; the ergot was for tone to the circular muscles; the heat as a stimulant to the bowels; the *hydrastis* as a tonic and healing agent to any catarrhal or ulcerated condition which might be present, and the water as a vehicle and cleansing agent. The results of four months' treatment are that when the patient is careful of his diet he has but one movement of the bowels every twenty-four hours, and that at the time of the injection of the decoction of the *hydrastis*. He says if he guards his diet and cares for his treatment as directed, he never has more than one action per day.—*Mendenhall, in Med. Standard.*

TOTAL BLINDNESS FOLLOWING SHOCK — RECOVERY. — November 18, 1889, I was called to see a boy of six years, who had become blind the day before. The boy had been exceptionally rugged and active. October 23, he had a transient attack of headache and vomiting. November 4, he had a transient attack of what seemed to be a cold, accompanied by wandering rheumatic pains in the feet and limbs. November 12, a mild tonsillitis with a temperature of 101°. November 14, the mother fell down stairs; the boy was greatly frightened, and was soon seized with a severe headache followed by epistaxis and relief. Light diet had been ordered, but on the 16th he was so well and so hungry that he was allowed to eat a large piece of beef-steak for supper. The following day he had a convulsion followed by total blindness.

Status præsens, November 18—nervous and restless, but does not complain of pain. Answers questions slowly, but intelligently. Sensibility is much diminished in the extremities. The pupils are moderately dilated, and both react slightly to light, but the left less than the right. The ophthalmoscope shows no changes at the fundus. Small doses of calomel and iodide of potassium were ordered. November 20, vision began to return, and two days later

was fairly good. December 3, there is some anæsthesia of the hands and feet as well as diminished control of them. The arms and legs are considerably shrunken, and at times there are pains in the latter. The right pupil reacts sluggishly to light. Vision is good, and the fundus normal in both eyes. There is headache at times, but the boy eats and sleeps well, and is steadily improving.

At the present time Dr. Murray reports the boy as entirely recovered.—*Brown, in N. W. Lancet.*

ACUTE EPIPHYSITIS.—In March, 1890, a youth, aged fourteen, was supposed to have had an attack of acute rheumatism. He came under my care three weeks after its onset, with the usual signs of acute synovitis of the hip, very ill, and with a temperature of 101° . A few days afterwards some pus was removed with an aspirator from the neighborhood of the hip. For a day or two afterwards the local condition improved, but in the meanwhile it had been ascertained by cultures that the pus contained staphylococcus aureus. The temperature continued high (101.8°), and the boy was losing ground so rapidly that the hip-joint was explored by an anterior incision. There was pus both within and without the joint, and the upper epiphysis of the femur was only joined to the shaft by some soft inflammatory material, which was afterwards found to contain micrococci; the ligamentum teres and the acetabular cartilage were intact; but the articular cartilage of the femur had partly disappeared without any caries of the bone. The head of the femur was removed, and the wound drained and treated in the usual way. The dressing was renewed on the fifth, ninth and fourteenth day, and then replaced with a dry dressing, under which the wound healed within six weeks after operation.—*Lockwood, in Brit. Med. Jour.*

CHRISTIAN SCIENCE GOES MARCHING ON, as shown by the following extract from the *Republic*:

SIoux FALLS, S. DAK., Jan. 1.—Justin A. Pettigrew, brother of Senator Pettigrew, died at one o'clock last night. He was forty-five years of age and leaves a wife and daughter. He had been ill since Thanksgiving, and his wife, being an ardent believer in Christian Science, persuaded him to accept that treatment. Last week relatives living in the city telegraphed to Senator Pettigrew in Washington

to come home at once. As soon as the Senator arrived, he cleared his brother's house of the theorists, and called in several regular physicians, who declared yesterday that it was too late. The Christian Scientists, on the other hand, assert that had their treatment of the patient been left alone he would not have died. There is considerable feeling in the city over the circumstances. Senator Pettigrew is greatly incensed at the Christian Scientists.

POISONING BY FILICIS MARIS.—Up to the present three cases of poisoning by this drug have been reported, two of them proving fatal. A recent case reported by Hofman (*Wien. klin. Wochenschr.*) is that of a little girl, *æt.* five and one-half years, who was given 7.5 grams of the ethereal extract of the filicis maris, for the removal of a tape-worm. At the end of one and one-half hours deep sleep ensued, which was followed at the end of three hours by convulsions and death. The post-mortem examination was negative; it simply showed a pre-existing miliary tuberculosis of the lungs and abdominal organs.—*J. A. M. A.*

WHERE TO PUNCTURE IN PARACENTESIS.—Prof. Keen selects the following points for the passage of the needle in the operation of paracentesis. In paracentesis thoracis the place of election is between the eighth and ninth ribs in the line of the axilla. In paracentesis abdominis the needle should enter in the middle line, the patient being in a sitting posture, and the bladder having been previously emptied. In paracentesis pericardii the patient should be in the recumbent posture, and the needle should enter at the fifth interspace in front, due regard being had for the heart and large vessels.—*College and Clinical Record.*

A SIMPLE METHOD OF WITHDRAWING A NEEDLE.—I think it may be of service to record a simple means by which I obtained the removal of a broken needle from the heel of a girl, *æt.* twelve years, whom I saw lately walking about on her toes to avoid her right heel, into which a needle had been broken, touching the ground. The buried end could be felt, but any pressure led to its further entry. I directed her to wear a large thick corn-plaster around the spot, with a little wet cotton-wool in the center, and to tread freely on the heel. Within a week afterward she showed me the

needle, which had protruded, and she had easily withdrawn it. Thus no wound was made, and no scar left to be a tender spot on the plantar surface.—*Chas. Steele, M.D., F.R.C.S., in Brit. Med. Journal.*

DISEASES OF THE LUNGS.—In the spring and autumn, and especially during epidemics like the recent visitation of influenza, cases of acute bronchitis are very common, and generally after a sudden change in the weather patients from different parts of the city come in complaining of about the same symptoms, which seem to have appeared about the same time, and evidently due to the same cause. Such cases usually recover under the use of some simple expectorant mixture. The favorite cough medicine used at this dispensary is the M. A. M. mixture, which written in full is as follows:

R. Ammon. Muriat., ℥ ss.
Mist. Glycyrrhiz. Comp., ℥ iv.

M.

S.—Take a dessertspoonful every three or four hours.

The dose is smaller in the extremes of life, and in severe coughs it is given every three hours or more frequently. This has become a very successful remedy in the large majority of cases of acute bronchitis of short duration and slight physical signs, and in fact all lung coughs seem to be improved by it. In a few cases it causes constipation, and then something else must be substituted, as some of the syrups, etc. Besides the internal medication, counter-irritation with Stokes' liniment, mustard, iodine, poultices, etc., form an important part of the treatment, and when there is laryngitis with the bronchitis, inhalations of the compound tincture of benzoin or oil of turpentine, poured on steaming water, give great relief.

Another favorite prescription is the following:

R. Ol. terebinthin., ℥ ii. to ℥ iii.
Mucil. Acaciæ, q. s.
Aq. Cinnamomi, ℥ i.
Aquæ q. s. ad., ℥ vi.

M.

S.—A tablespoonful in a little water after meals.

This is an excellent expectorant mixture when the secretions are abundant and not easily coughed up. Ofttimes the cough is of such an irritating character that these ordi-

nary expectorant mixtures avail little, then recourse must be made to a narcotic in some form. Morphia, of course, is a powerful remedy, but it has serious objections, not the least of which is the tendency to form the habit. Codeia, a very useful alkaline of opium, has the advantage of not constipating as much as morphia, and the codeia habit is not apt to be formed, as patients rarely recognize it as belonging to opium. This united with wild-cherry bark in some form will stop an irritating cough, or at least prevent those frequent spasms of coughing. The virtue of the wild-cherry bark depends on the hydrocyanic acid in it which acts on the pneumo-gastric nerve. A useful combination is—

R_y. Codeiæ sulphat., gr. viii.
Syr. prun. virginian., ℥ii.

M.

S.—A teaspoonful in a little water three or four times a day and at bedtime, if necessary.

Frequently cases of cough with no other physical signs will appear. They often complain of pain over the sternum and under the left scapula and are constipated. Such cases have what is popularly called a “stomach cough,” and while not strictly belonging to this department, are treated there. Such often have belching, regurgitation or bad taste in the mouth, and the other signs associated with dyspepsia. If the throat is very sore or raw and the soft palate relaxed, the following gargle is ordered:—

R_y. Zinci Sulphat.
Acid Carbolic, āā gr. iv.
Glycerin, ℥ ss.
Aquæ, ℥ iiiss.

M.

S.—Use as a gargle three or four times a day.

This is called “McSherry’s Gargle” after Dr. H. Clinton McSherry who introduced it, and it is extremely useful. For internal treatment such cases improve on some tonic or antacid mixture. The antacid mixture used is made up as follows:—

R_y. Sod. Bicarb., ℥ ii.
Tinct. Calumbæ,
Aq. Calcis āā ℥ ii.

S.—Take a tablespoonful about fifteen minutes before each meal.

Another remedy which does good is called The Dispensary Tonic and is made as follows:—

R_y. Ferri Sulphat.
Cinchonid. Sulphat., āā gr. xxiv.
Aquaæ, ʒ vi.

M.

S.—Take a tablespoonful well diluted in water after each meal.

Cases of bronchial asthma, spasmodic asthma, chronic bronchitis and chronic bronchitis with emphysema all turn up in a dispensary practice. In some instances the diagnosis is very easy and the case is soon made out, but at other times the symptoms can only be treated and a positive cure is not looked for.

In chronic bronchitis alone and chronic bronchitis associated with asthma the use of the iodide of potassium has been attended with excellent results. Occasionally when there is a suspicion of a spasmodic character it is given with the bromide of potassium in the following prescription:

R_y. Potass. Iodid., gr. lxxx.
Potass. Bromid., ʒ iii.
Aquaæ, ʒ iv.

M.

S.—Dessertspoonful in a little water three or four times a day.

When the bronchitis is more chronic in character and there are loud, sonorous and sibilant râles both on expiration and inspiration, and an emphysematous condition is suspected with the bronchitis, the iodide of potassium in conjunction with the M. A. M. mixture has produced excellent results. It is given in the following prescription:

R_y. Ammon. Muriat., ʒ ss.
Mist. Glycyrrhiz. Comp., ʒ iv.
M. et adde
Potass. Iodid., gr. lxxx.

M.

S.—A dessertspoonful in a little water three or four times a day after meals.

In all these chronic conditions just related the portal system must be relieved of its congestion by keeping the bowels open. When the patient is anæmic or seems to lack nourishment, or indeed in almost all cases, the Dispensary

Tonic or Fowler's solution should be exhibited in addition to these expectorant mixtures. Cases of pneumonia and pleurisy come to the dispensary in the spring and autumn, but such cases are more common in the hospital or at their homes, and comparatively few come in proportion to the cases of bronchitis and phthisis. In the treatment of these cases the usual routine is followed, but such cases either get well and do not come back often or run into phthisis and are treated as chronic cases.—*Baltimore Medical and Surgical Record*.

Book Notices

TEXT-BOOK OF HYGIENE. A Comprehensive Treatise on the Principles and Practice of Preventive Medicine from an American Standpoint. By George H. Rohé, M.D., Professor of Obstetrics and Hygiene in the College of Physicians and Surgeons, Baltimore; Member of the American Public Health Association, etc. Second Edition. Thoroughly Revised and Largely Rewritten, with Many Illustrations and Valuable Tables. 8vo. Pp. 421. Philadelphia: F. A. Davis. Cincinnati: R. Clarke & Co. Cloth. Price, \$2.50.

The author states that it has been his aim in writing this book to place in the hands of the American student, practitioner and sanitary officer, a trustworthy guide to the principles and practice of preventive medicine. He has endeavored, therefore, to gather within its covers the essential facts upon which the art of preserving health is based, and to present these to the reader in clear and easily understood language.

It has been the effort of the author to incorporate in the present edition—the second—the advances made in sanitary science and art from the issue of the first edition to the present time.

The work contains twenty-three chapters, each chapter being devoted to some subject pertaining to hygiene. For instance, Chapter I. treats of Air; Chapter II., Water; Chapter III., Food; Chapter IV., Soil; Chapter V., Removal of Sewage; Chapter VI., Construction of Habitations; Chapter VII., Construction of Hospitals; Chapter VIII., School of Hygiene. Other chapters treat of Mili-

tary and Camp Hygiene; Naval Hygiene; Prison Hygiene; Baths and Bathing; Clothing; Disposal of the Dead; The Germ Theory of Disease; History of Epidemic Diseases; Antiseptics, Disinfectants and Deodorants, etc.

The author states in regard to the germ theory of disease, that it was not until the latter part of the last century that the theory took definite shape. To Henle, however, he gives the credit of first enunciating and definitely defending it in 1840. Pollender, in 1855, and Branell, in 1857, he says, found numerous minute rod-like organisms (bacteria) in the blood of animals dead from splenic fever. In 1863 Davaine showed beyond doubt that the little organisms discovered by Pollender were the true cause of splenic fever, or anthrax. The more recent researches of Robert Koch upon the history of these bacteria or bacilli of splenic fever, he asserts, have removed all doubt of their etiological significance. Koch has so strongly fortified his position with proofs, he considers, that consumption or tuberculosis is a disease of microbic origin, and dependent upon the presence, in the affected tissues, of an organism which he named *bacillus tuberculosis*, that it may now be regarded as fully demonstrated. "He has likewise shown (1885) that Asiatic cholera is due to a bacterial organism, termed by him the comma bacillus, from its shape. It is generally regarded by bacteriologists, however, to belong to the class of organisms known as spirilla, and not to the bacilli. Eberth discovered the bacillus which is now generally accepted as the cause of typhoid in 1880; Fehleisen, the micrococcus of erysipelas in 1883; Obermeier, the spirillum of relapsing fever in 1868; Schutz and Löffler discovered the bacillus of glanders in 1882; Neisser announced the discovery of the micrococcus of gonorrhea in 1879. The bacillus of leprosy was discovered by Hansen in 1879. The micro-organisms of malaria (*oscillaria malariae*), which are believed to be animal organisms, were discovered by Laveran in 1881. This organism is different from the *bacillus malariae* of Klebs and Tommasi-Crudeli, which most pathologists do not regard as possessing significance. Pneumonia may also be regarded as a microbic disease, since the demonstrations of Sternberg, Weichselbaum and Fränkel of the constant presence of the micrococcus *Pasteurii* in the sputa in that disease."

There is not a chapter in the work that does not contain much of interest in regard to sanitary science and the pre-

vention of disease. The volume brings the knowledge of the subjects of which it treats fully abreast of the information of the present time. The author has been a most industrious, attentive student, and nothing has escaped his attention of the results of the investigations of those engaged in researches. Not only physicians, but all others interested in hygiene and sanitary science generally, should closely study this work, since it is full in its information and contains all the recent facts which have been developed by scientists by close study and observation. We consider it the best text-book upon hygiene that is before the profession at the present time.

A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS.

By Frank Hastings Hamilton, A.B., A.M., M.D., LL.D., Late Professor of Surgery in Bellevue Hospital Medical College, and Surgeon to Bellevue Hospital, New York; Author of a Treatise on the Principles and Practice of Surgery, etc. Eighth Edition, Revised and Edited by Stephen Smith, A.M., M.D., Professor of Clinical Surgery in the University of the City of New York, and Surgeon to Bellevue and St. Vincent's Hospital, New York. Illustrated with Five Hundred and Seven Wood-cuts. 8vo. Pp. 849. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co., 1891. Price, \$5.50.

This work is so well known to all physicians, surgeons and medical students that it needs no endorsement. It has received the highest endorsement that a work upon a department of surgery can possibly receive. It is used as a text-book in every medical college of this country, and the publishers have been called upon to print *eight editions* of it. What more can be said in commendation of it? It has been said with truth that it is doubtful if any surgical work has appeared during the last half century which more completely filled the place for which it was designed. As Dr. Smith says, its great merits appear most conspicuously in its clear, concise, and yet comprehensive statement of principles, which renders it an admirable text-book for teacher and pupil, and in its wealth of clinical materials, which adapts it to the daily necessities of the practitioner.

The editor states that his efforts have chiefly been "in the direction of rendering the text more compact, of elimi-

nating matter now irrelevant, of using a subordinate type for clinical cases, of illustrating the various subjects more fully by selected cuts, and of adding such new facts, cases and opinions as were deemed necessary to render the work a correct exponent of the present state of knowledge in this department of practice." These changes and additions, he has no doubt, as they undoubtedly will, enhance the value of the work.

Fractures and dislocations are injuries which the general practitioner, in his character as a surgeon, is most called upon to treat. They form a part of surgery that he can not avoid taking charge of. Cutting for stone, removing tumors, he can send to others to operate, but he can not decline a fracture or dislocation. Under the circumstances, therefore, he needs all the aid he can secure. But what better assistance can he seek than a work that is devoted exclusively to treating fractures and dislocations, and consequently contains full information, in plain language, for the management of every emergency that is likely to be met with in such injuries? The country is filled with railroads and manufactories where accidents are constantly occurring, and to which general practitioners, and not distinguished surgeons, are constantly liable to be called.

We consider that the work before us should be in the library of every practitioner.

A MANUAL OF AUSCULTATION AND PERCUSSION. Embracing the Physical Diagnosis of Diseases of the Lungs and Heart, and of Thoracic Aneurism. By Austin Flint, M.D., LL.D., Professor of the Principles and Practice of Medicine and of Clinical Medicine in the Bellevue Hospital Medical College, etc. By J. C. Wilson, M.D., Lecturer on Physical Diagnosis in the Jefferson Medical College, etc. Illustrated with Woodcuts. 12mo. Pp. 268. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, \$1.75.

This work contains the substance of the lessons which Professor Flint gave for many years, in connection with practical instruction in auscultation and percussion to private classes composed of medical students and practitioners.

In his courses of practical instruction, Professor Flint always impressed upon his students of physical diagnosis

the necessity of sufficient study of the physical conditions and the signs of health, as a *sine qua non* for success in learning the morbid sounds which are present in disease. Students, really, not unfrequently take their places in a class to receive instruction in auscultation and percussion who never percussed a healthy chest nor ever heard the respiratory murmur proceeding from the lungs in a normal condition. Such a course is as absurd as to begin the study of pathology without first having studied anatomy and physiology.

But to percuss and auscultate the healthy chest for the purpose of learning and having impressed upon the mind the normal sounds which proceed from the lungs and heart in health, there is need of instruction from an expert. Professor Flint, therefore, has devoted several chapters of the work to explaining the character of the sounds as heard over the chest of persons in a normal condition of health—the chest or thorax being divided into different regions, each one of which presents peculiar modifications.

The work has met with the favorable endorsement of the profession, a fifth edition being needed to meet the demand for it. Professor Flint's Practice of Medicine has met with a success that has never been equaled by any other work of the kind in this country. The one before us on Physical Diagnosis seems also to have become a favorite text-book with medical students. As stated by the editor, its value is to be discovered in the clearness and appropriateness of its style, the accuracy of its statements, its scientific method, and the practical treatment of subjects at once difficult and essential to the student of medicine.

THE PHYSICIAN'S LEISURE LIBRARY. "Auscultation and Percussion." By Frederick C. Shattuck, M.D., Professor of Clinical Medicine in Harvard University; Visiting Physician Massachusetts General Hospital, etc. Paper. 12mo. Pp. 121. Detroit: George S. Davis. Price, 25 cents.

We have here another work devoted to physical explorations of the chest. It is not so full as the work of Professor Flint on the same subject; and, consequently, is not so well adapted as a text-book for students engaged in the study of Physical Diagnosis. Dr. Shattuck's work will be found useful by physicians for reviewing for the purpose of refreshing the mind.

PHYSICIANS' LEISURE LIBRARY. Intestinal Diseases of Infancy and Childhood. Physiology, Hygiene, Pathology and Therapeutics. By A. Jacobi, M.D., Ex-President of the New York Academy of Medicine; Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, New York. In Two Volumes. 12mo. Pp. 266. Paper. Detroit: George S. Davis. Price, 50 cents.

These two small volumes constitute a very interesting and valuable work upon the subjects of which they treat. Dr. Jacobi, the author, is a specialist in the diseases of infancy and childhood, and is regarded throughout this country as a physician of great attainments.

Everything pertaining to the welfare of infants and children are discussed in this work by the distinguished author—food, air, clothing, wet-nursing, etc. As regards wet-nurses, Dr. Jacobi says: "A wet-nurse must not be thrown too suddenly upon conditions which are quite strange to her. She must live, as nearly as possible, in the manner to which she has been accustomed. A nurse who is removed from the hay-field or kitchen to the boudoir, and who is held in restraint from fear lest she might eat a raw apple, drink a glass of beer, meet her lover, or who is deprived of her customary physical exercise, will not retain her health nor give a proper quantity of milk."

The very low price of the work will enable every physician to procure and study it. A familiarity with the contents will increase the qualifications of any medical man to treat the affections of the very young.

Editorial.

FUNCTIONAL ALBUMINURIA.—Some time ago a physician residing some distance from Cincinnati sent us a specimen of urine from which, upon heating, there was thrown down a very heavy deposit of albumen. . In fact, so abundant was the albumen that when an ounce test-tube was filled with the urine, and heated to boiling, the albumen that became freed from solution, after having been permitted to subside, extended from the bottom to nearly half of the way to the top of the fluid. The physician, on calling upon us some time afterwards, informed us that his patient had been subject to albuminous urine for several months—for a year or

more—and while he was not what might be termed a robust man, yet he was generally in good health, and attended daily to his business. He stated that albumen was present in the urine at all times—in the morning when he first arose from bed, at 10 o'clock A.M., at noon, in the middle of the afternoon, in the evening, and at bedtime.

What did the presence of albumen in the urine in this case signify? Certainly it did not indicate Bright's disease of the kidneys or any other pathological condition. We felt constrained to state to our medical friend that, up to that time, the albuminuria in the case of his patient was but a functional condition, and was not a pathological symptom.

We have been led to report this case from having had sent us very recently a pamphlet made up of a paper on "Functional Albuminuria," by Dr. Wm. B. Davis, of Cincinnati, read before the *American Medical Association* at its forty-first annual meeting. In this paper Dr. Davis says that "it may be justly concluded that there are a large number of persons going about their business at the present time with albuminuria, and utterly unconscious of the fact. It is a matter of considerable importance to both the public and the profession to make ourselves fully and rightfully informed with regard to them, and of the full clinical significance of the albuminuria. The subject is yet comparatively new, and each case requires a separate and an attentive study, in order to enable us to recognize them when they may happen to fall under our view."

Dr. Davis states that a prominent physician quite recently said to him as he looked into a test-tube and saw a precipitation of albumen: "My patient is doomed—there is his death-warrant," pointing to the albumen. But Dr. D. calls attention to the following facts: Edes declares that the presence of albumen in minute traces is much more common than its absence, and the amount detectable by heat and nitric acid may be approximately stated as from ten to twenty per cent. of persons examined; Leube found albumen in the urine of sixteen per cent. of one hundred and nineteen healthy surgeons; Munn found it in eleven per cent. of two hundred apparently healthy persons who presented themselves for life insurance; Mahomed found albuminuria in fifteen per cent. of seventy-seven "practically healthy persons" examined for life insurance by him; Capitan found in soldiers forty-five, and in children eighty-

nine per cent.; De La Celle says that albumen is to be found at times in the urine of seventy-six to one hundred per cent. of healthy persons, both young adults and children; and Professor Senator says: "*I should consider it not improbable that if we were to examine the urine for long periods, at different times of the day, and with care, we should sooner or later find it to contain albumen in the case of every healthy man.*"

As regards the causes of *functional albuminuria* Dr. Davis mentions the following: Cold bathing, the ingestion of food, excesses in eating, drinking, and venery, vascular tension particularly at puberty, passive congestion, cold and wet, privation, depressing emotions, an elongated prepuce, skin disease, posture, prolonged brain work, severe physical exercise, hepatic complications, increased pressure and retardation of blood flow, mechanical pressure, etc. Schrieber has shown that compression of the thorax in young subjects for ninety seconds will cause it, and Ralfe observed that the weight of a soldier's accoutrements upon the chest may have been the cause in the production of albuminuria. The effects of overstudy, combined with anxiety, very frequently produces it in candidates for graduation in our colleges. Professor Ralfe said: "Hardly a season passes but I am consulted by some student who has discovered albumen in his urine whilst reading for his examination, and of whom I hear no further when his troubles are over."

Stewart classifies functional albuminuria as follows: 1. Paroxysmal; 2. Dietetic; 3. Albuminuria from muscular exertion; 4. Simple persistent. The case reported by us at the beginning of this article, we presume, should be classed as "Simple persistent." But to this classification of Stewart we would add a fifth class—Albuminuria resulting from mental worry, nervous depression, overtaxing of the mind.

SCOTTISH MICROSCOPICAL SOCIETY.—The fourth meeting of this Society was held in Edinburgh on the 16th inst., Professor Rutherford, F.R.S., in the chair. The President referred to the loss the Society had sustained by the decease of one of its vice-presidents, Mr. Adolf Paul Schulze, a native of Saxony, who settled as a merchant in Glasgow, and devoted his leisure time to microscopical optics, more especially to photomicrography, in which he acquired very remarkable skill, his article on the subject in the *British*

Journal of Photography for May 24, 31 and June 7, 1889, being one of the best expositions of the practice of that difficult subject that has yet appeared. Mr. G. W. Watson, L.D.S., made a communication on pathology of dental caries, which was illustrated by sections and photographs of carious teeth prepared by himself, and which were shown on the screen with the oxyhydrogen microscope; the destruction of dentine by the growth of micrococci and bacilli in the tubules was clearly demonstrated. Mr. James Hunter, F.R.C.S., Edinburgh, gave an interesting lantern demonstration of the properties of simple lenses, some of which had been devised by himself. Professor Macfadyean, B.Sc., gave an account and a demonstration of the morphology of actinomyces.—*Lancet*.

THE IRISH GIANT.—Prof. D. J. Cunningham lately read a paper at the Royal Irish Academy on the skeleton of the Irish giant, Cornelius Magrath. He believes that it was a case of acromegaly, there being undue development of various portions of the skeleton—viz.: abnormal size of the hands, feet and lower jaw, which projected greatly below the upper jaw, while the head itself was not in equipoise with the vertebral column, and in this respect resembled the negro head. Magrath's height was said to have been *seven feet four inches*.

TREATMENT OF ERYSIPELAS.—The *Lancet*, January 10, 1891, says that an elaborate research, clinical and bacteriological, had recently been published by Professor Nussbaum's assistant, Dr. Julius Fessler, on the treatment of erysipelas by ichthyol, a plan which has been for some years extensively adopted in Munich. From laboratory experiments it was evident that, though ichthyol has only a slight effect in preventing the development of staphylococci, it has a very potent deterrent influence on the multiplication of streptococci, and it is well known that it is the latter kind of bacteria that are the cause of erysipelas. The method of treatment consists mainly of rubbing a strong ichthyol ointment energetically, and for ten minutes at a time, into the affected surface and in its neighborhood; ichthyol in the form of pills may also be given internally. Where there is a wound it must be very carefully disinfected, and an antiseptic dressing applied. The results of this treatment as compared with ordinary methods are embodied in

several instructive tables. From these it appears that while the mean duration of the cases treated by other methods from 1880 to 1888 was about twelve days, in no single year falling below nine days, the cases treated by ichthyol from 1886 to 1888 presented a mean duration of under seven days, while in the first half of 1889 it fell to 5.6 days.—*Reporter*, of Philadelphia.

A NEW MEDICAL BOOK.—Several months ago we announced that Dr. G. P. Hachenberg, of Austin, Texas, was contemplating publishing a work entitled a "Medical Consultation Book, or a Pharmacological and Clinical Book of Reference, etc. Including an Extensive Collection of Favorite Prescriptions from the Most Reliable Authorities of the Medical Profession, so Classified as to be Ready of Access for Authenticated Treatment."

At the time we announced the preparation of the work, the Doctor had not arranged for its publication, but he now informs us that he has it in press, and that it will probably be ready for delivery in the early part of the summer.

In the work there will be an uninterrupted enumeration of the remedies—those mentioned in Therapeutics and elsewhere, with the prescriptions that follow, etc., amounting to nearly twenty thousand. The object of this arrangement is not only to facilitate records of treatment, but often, where it is practicable, to prescribe by numbers, in a measure doing away with that vexed question of the personal ownership of a prescription by conferring it alone to the dispensing druggist, as it should be.

A circular sent us describing briefly the character of the work, enumerates many features that we have neither the time nor the space to mention, as the coming issue of the MEDICAL NEWS is nearly in type. We will state, however, that we believe that the book will be found to be a very valuable one, rendering great assistance in the treatment of many diseases. It will probably be similar to a work by Napheys, now deceased, but a great improvement. Napheys' was in two volumes—Medical and Surgical—but Dr. Hachenberg's publication will be in one large volume.

For descriptive circulars, address Dr. G. P. Hachenberg, Austin, Texas.

CAMPHO-PHENIQUE.—What is Campho-Phenique? It is a definite compound resulting from the chemical union of

pure crystallized phenol and gum camphor. It has a hot, aromatic, not unpleasant taste, differing from that of its constituents, and an odor in which the camphoric predominates. It is not soluble in water, which, however, gradually decomposes it. It is soluble, in all parts, in alcohol, ether, chloroform, benzin, benzol, the essential and fixed oils, and fats of animals, vegetable and mineral origin. It is volatile at ordinary temperatures, and remains fluid under great cold, as great as -30° F.

It is spoken of in the highest terms by members of the profession from every part of the country. Dr. J. Edwin Michael, Professor of Clinical Surgery, of Maryland, says that Campho-Phenique is a most valuable remedy. He has found it unequaled as an antiseptic, stimulating application to ulcers, venereal and other, and for the treatment of abrasions, bruises and cuts. Dr. Matthews, of Louisville, states that "for that soul-harrowing itching of the anus, which sometimes accompanies piles, Campho-Phenique is efficient—magical."

We could fill a dozen pages or more with extracts from letters by physicians bearing testimony of the remarkable qualities of Campho-Phenique as a remedial agent. It is a preparation that "has come to stay."

CONSTITUTION OF THE UNITED STATES MEDICAL PRACTITIONERS' PROTECTIVE ALLIANCE.

Founder, DR. J. H. DEWOLF, Baltimore, Md.; President, DR. W. H. CRIM, Baltimore, Md.; Vice-President, DR. W. V. WILSON, West Haven, Conn.; Secretary, DR. J. F. DAVISON, Glendola, N. J.; Treasurer, DR. R. B. ELDERDICE, McKnightstown, Pa.

Article I. This Society shall be known as the United States Medical Practitioners' Protective Alliance.

Article II. The object of this Association shall be to maintain organized co-operation amongst the practicing physicians, who are legally qualified to practice in their respective States, and in good standing in the profession; for the purpose of protecting medical practitioners from the abuse of dispensaries that treat many who are well able to pay; from the unjust competition caused by short term, quick graduating, and inferior medical colleges. To endeavor to promote the passage of just and equitable laws, regulating the practice of medicine in all the States, so that the license to practice issued by any one State shall be valid in any other State; and to devise means to enhance our financial condition (and thereby our usefulness) in every

honorable way, and to derive the incalculable benefits that only can be obtained by combination and unity of action.

Article III. The members of this Association shall exercise toward each other, toward all physicians, and toward all mankind, that courtesy and just dealing to which every one in his legitimate sphere is entitled, and any departure therefrom shall be deemed unprofessional, undignified, and unworthy the honorable practitioner. It shall also be regarded as unbecoming to engage in any form of advertising or practice which shall tend to lower the physician in the esteem of the community or reflect discredit upon his professional associates.

Article IV. The officers of this Association shall consist of a President, Vice-President, Treasurer and Secretary, who will be elected annually. The seal of this Association must be stamped on all official papers.

Article V. The fees for membership shall be three dollars (\$3.00) on admission and two dollars (\$2.00) per annum thereafter. Delinquent members shall be dropped for non-payment of dues whenever in arrears over two years.

Article VI. Any member may be officially censured, invited to withdraw, or be expelled from membership, for improper conduct or violation of professional comity. But it shall be necessary for a specific charge to be made in writing, with name of accuser, and a copy to be presented to the accused, or some person acting in his behalf, and another placed in the hands of the President or Secretary one month before the time of holding a regular meeting, when ample opportunity will be given for a trial.

Article VII. That direct appeals be made by us as a body to the Legislatures of our various States, from time to time, as may be deemed expedient, to secure the repeal of unjust or obnoxious laws which may be in existence, or the passage of laws that are vital to our success and our welfare as a profession.

Article VIII. That an effort be made to secure a law in each State that will secure the medical practitioner from the many losses he now sustains from those able to pay, but unwilling, and to make the physician's claim in all cases a preferred one, which must be paid before the pro rata of an estate, as is now the law in some of the most enlightened countries of Europe.

Those desirous of joining address Dr. J. H. DeWolf, 1600 Franklin Street, Baltimore, Md. Please enclose stamp.

ALBUMINATE OF IRON.—We are impelled to speak in high terms of the albuminate of iron in consequence of our experience with it. It was brought to our attention a year or more ago, but we were not at first disposed to consider that any advantage could be obtained from its use above that which could be gotten from other ferruginous preparations; consequently very considerable time elapsed, after having heard of it, before we were induced to prescribe it.

The first case in which we were induced to prescribe albuminate of iron was a young woman, about eighteen or twenty years of age, who was convalescing from a very severe attack of pneumonia, and who had been left in a most feeble condition by the disease—her vital powers having been greatly prostrated—she was anemic—had no appetite, and was troubled with insomnia. Her stomach was sensitive, and she had no tolerance of alcoholic stimulants. The muriated tincture of iron not being borne well, and quinine producing unpleasant symptoms, it occurred to us to prescribe the Syrup of Albuminate of Iron as made by Mr. J. A. Flexner, of Louisville, Ky.

The effects upon this young woman were certainly very favorable indeed. Her improvement was more rapid than could have been expected; and she, in a short time, regained her usual health and strength. In fact, in a not very long time, she announced to us that she felt better than she did before she was taken ill—better than she had for a year or two.

Since having used it in the case above mentioned, we have prescribed it in all cases in which iron was indicated, to the exclusion of other ferruginous preparations. So far we have had every reason to be satisfied with its action. We recommend physicians to make a trial of the albuminate of iron, as we feel sure that they will sometimes witness favorable results, when other preparations of iron have failed to produce the desired therapeutic effects.

GRATUITOUS MEDICAL SERVICES.—The editor of a medical journal recently visited New York City, and, while there, visited a number of the hospitals. On his return home he wrote an article for his journal on the subject, from which we quote the following paragraph as found in the *Medical Record*:

“We had an opportunity recently of visiting some of the hospitals and clinics of the great metropolis. It was

while the International Congress was in session, so that very few of the most prominent operators were to be seen. But this did not prevent our getting an insight into the workings of the institutions, clinics, etc. The latter presented many features of especial interest. The buildings of the two largest being comparatively new, the appointments and facilities for clinical teaching and for handling the large number of patients in attendance daily are, of course, of the latest and most approved order. But what was most striking, outrageous as it is, was the great number of well and fashionably dressed, evidently well-to-do people, both male and female, who applied for free treatment. It appears that the anxiety for abundance of material is so pressing that there is hardly any discrimination in this respect. At the — on Tuesday, August 12, there were five hundred and sixty-eight patients, and, judging from their appearance, we venture to say that three-fourths, at least, of them were abundantly able to pay for private medical service. We have, of course, heard the numerous complaints that have been awakened among the New York physicians. The profession of New York would be justified in arising in emphatic and effectual protest against such wholesale diversion of their revenues. Physicians are swindled and beaten out of an undue proportion of the fruits of their labor already by the public in general, so that it would appear but seemly for the profession to avoid and suppress, as far as possible, this rapidly increasing source of pecuniary loss through a channel of its own making."

MEETING OF MEDICAL SOCIETIES.—The American Academy of Medicine will meet in Washington, D. C., May 2, 3 and 4. The American Medical Association will also meet in Washington, beginning May 5. The National Association of Railway Surgeons meet at Buffalo, beginning May 7. The Congress of American Physicians and Surgeons will meet in Washington September 22, 23, 24 and 25. In connection with this Congress will be held the meetings of the American Climatological Association, American Ophthalmological Society, American Otological Society and American Neurological Association. American Association of Andrology and Syphilology and American Dermatological Association will both meet in Washington, beginning September 22, the first continuing until the 24th, and the

latter until the 25th. The American Surgical Association will also meet in Washington September 22 to 24. Southern Surgical and Gynecological Association meets at Richmond, Va., November 10, 11 and 12. American Public Health Association meets in Kansas City in November; date not fixed. The Mississippi Valley Medical Association meets in St. Louis October 14, 15 and 16. Tri-State Medical Association, of Mississippi, Alabama and Georgia, will meet at Chattanooga in October; date not fixed. The Ohio State Medical Society will meet at Put-in-Bay June 17, 18 and 19. The Indiana State Medical Society meets at Indianapolis May 13, 14 and 15. The Illinois State Medical Society meets at Springfield May 19, 20 and 21. The Kentucky State Medical Society meets at Lexington some time in May. The Texas State Medical Association meets at Waco April 28, 29, 30 and May 1. The Michigan State Medical Society meets at Saginaw June 11 and 12.

CREMATION.—A Cincinnati clergyman has recently been preaching sermons advocating cremation. He urges that it does away with costly funerals, the expenses of which, very often, the family of the deceased are illy able to bear, but fashion, that most inexorable master, compels them to endure the cost, though, in doing so, they have to submit to extreme privations. But he advances as a primary reason why cremation should be preferred to burial in disposing of the dead, that it is better for the living. When a dead body is returned to its original elements immediately by burning, there will be no noxious effusions emanating from it to poison the air and contaminate the water. A small urn of ashes will be all that will be left by the fire, which can harm no one.

Much, of course, can be said in favor of cremation, but it should be kept in mind that after cremation has been performed, all opportunities to investigate the cause of death are destroyed. It sometimes happens, yea, frequently, that, a week or a month after the decease of a person, strong suspicions will arise that death did not result from natural causes. These suspicions are often proven to be correct by an investigation after disinterring the remains. But if a body immediately after death has been taken to a crematory instead of a cemetery to be disposed of, no investigation can be made to confirm the suspicions, however strong they may be, that death was not the result of natural causes.

A cremation society in England have adopted the following resolutions as safeguards against cremating an individual who might have died from other than natural causes: 1. Requiring the certificate of the medical practitioner in attendance on the deceased during his last illness; 2. Requiring a second independent certificate by another practitioner after careful inquiry into the circumstances attending the illness; and (3), should any doubt remain requiring the evidence afforded by necropsy, a further security exists in the resolution of the society to refuse cremation in any case when the least doubt exists respecting the cause of death.

But really no means can be absolutely relied upon as evidence that a person who is to be cremated died from natural causes. Undoubtedly thousands of persons have died from the effects of poison, as regards which there never was any suspicion; but as, by interment, the body may be examined weeks after death for signs of poisoning, it affords the surest method for subsequent discovery of murder by poisoning. Suspensions of foul play usually arise while disposing of the property of the deceased through the conduct of the criminal; but in the case of cremation it can not then be discovered, for cremation always takes place immediately after death.

THE DISSEMINATION OF TUBERCLE UNDER KOCH'S TREATMENT.—Some time ago we learned that Professor Virchow did not believe in the efficacy of Koch's lymph in the treatment of tuberculosis. Instead of curing the disease, he is of the opinion that the injection of the lymph often disseminates tubercles throughout the organs of the body.

A correspondent of the *Lancet* says that, at a recent meeting of the *Berlin Medical Society*, Professor Virchow showed specimens from the body of a man, aged fifty-four years. He had been admitted into the hospital for pleurisy with effusion. From October 10 to November 26 he remained in a satisfactory state; no fever or loss of weight. Then injections were begun, five in all, each five milligrammes, and each time with marked reaction (temperature 104°). From this time he began to lose weight, and after the last injection to have continued fever. He died, and the examination made that morning (21st) showed that in addition to old induration at both apices and the remains of pleurisy, a widespread miliary tuberculosis in lungs, spleen, kidneys and liver.

Dr. Liebmann, of Trieste (*Berlin Klin. Woch.*), says that he has discovered, by examining the blood of those who have undergone injections of Koch's lymph, that tubercle bacilli are found in the blood. The method employed was to carefully disinfect by hydrochloric acid and alcohol the microscopic cover-glasses, etc., employed, and to take a drop of blood from the finger, previously thoroughly cleansed with pure alcohol and ether, and the needle also having been previously heated to redness. The preparations were placed in warm carbol-fuchsine for half an hour, then washed in distilled water, stained for one minute in Gabbet's solution, and examined in water. Nine cases are given. All the patients reacted markedly to small doses; and bacilli, sometimes granular or broken, were to be found in the blood on the evening of the day of the injection or the next day, but they disappeared if the injection was not repeated. Dr. Liebmann states that he never could find bacilli in the blood of tubercular patients not treated by this method, and considers his observation to prove that the employment of Koch's remedy may lead to the entrance of bacilli into the blood of patients not suffering from generalized military tubercle.

A CHICAGO FEE BILL.—We copy the following from *Medical Progress*, of Louisville:

"The Chicago doctor believes in being well paid for whatever attention he may bestow upon his patient. Compared with the fees received in smaller towns, especially in Kentucky, his compensation here seems quite large. The Chicago Obstetrical Society, in June, 1889, adopted a fee table which I understand is being rigidly adhered to by the members. The following are a few of the specifications:

"Attendance on accidental abortion, \$50 to \$200; attendance upon normal labor, \$50 to \$300; consultation out of town, \$100 to \$300; craniotomy, \$100 to \$300; cæsarian section, \$500 to \$1,000; ordinary visit at home, \$5.00 to \$10.00; vaginal section for any purpose whatever, \$500 to \$1,000.

"Outside of this Society, the prices charged, I think, vary according to the patient's ability to pay. The fees secured, however, as a general rule, are fair and compare well with those of other places."

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Original Contributions.

On the Treatment of Syphilitic Involvements of the Pharyngeal and Nasal Cavities.

BY A. H. OHMANN-DUMESNIL,

Professor of Dermatology and Syphilology in the St. Louis College of
Physicians and Surgeons.

ALL those who have ever had an opportunity of treating syphilis have found that to obtain good results several prerequisites are necessary. Leaving aside the question of internal treatment, there can be no doubt whatever that local lesions disappear more readily and with less destruction of tissue when they are treated by local measures. These local measures are to be varied according to the lesions which are present, and it is my purpose in this short article to point out a method which has proven quite successful in my hands in the treatment of syphilides of the buccal, pharyngeal and nasal cavities. These are covered with mucous membrane, which is very prone to exhibit the effect of the syphilitic process in the course of the so-called secondary period, or that in which the superficial tissues are involved.

It has been a matter of observation with me that whatever the lesions may be, and no matter what the topical applications are which are made, the local use of mercurials acts beneficially and has a tendency to hasten the reparative process in the same manner as is observed in the case of cutaneous lesions, so that the only problem which presents itself is to find a method which is painless, simple and efficient, as well as easily understood, so that the patient can apply it himself and thus be placed in a position to derive the full benefits accruing therefrom.

The principal involvements of the pharynx and adjacent parts, during the secondary period, are the so-called syphilitic angina, mucous patches and superficial ulcerations, the same holding good for the nasal cavities. These parts are so situated, more especially the pharynx and contiguous portions, that they must be used, and their use is frequently attended with considerable pain. The extension of the process to the larynx is not an uncommon affair, and whatever measures of relief, including cure, are employed, if they be but efficient they will be markedly appreciated by the individual receiving benefit from them.

It will further be found that internal treatment, no matter how active, is not sufficient to bring on that relief which would be expected, and local therapeutic measures become an absolute necessity. Without desiring to specify any particular local treatment so far as extra mercurial means are concerned, I wish to call attention to an adjuvant which I have found of marked benefit. I have determined to my own satisfaction that the best means of making local mercurial applications to the cavities I have specified, is by means of a spray producer, and the best, as well as the cheapest, for this purpose is the Acme Atomizer made by the A. M. Leslie Surgical Instrument Company, of this city, a cut of which instrument is herewith appended.



A. M. LESLIE S. I. CO.
ST. LOUIS.

The advantages attending its use may be briefly summed up as follows: 1. It dispenses entirely with the use of a tongue depressor, the outer class portion acting as such. 2. It can be used for the pharynx or nasal cavities. 3. As it throws a *cloud*, it penetrates beyond the portions in direct communication with it. 4. This fact renders it absolutely non-irritating. 5. Aqueous or fatty solutions may be used.

6. It is easily employed. 7. It is comparatively cheap. 8. The patient can apply it himself.

Now, as to its practical application, the choice of an aqueous or fatty medium rests largely with the physician, and is also dependent upon the carefulness of the patient as well as to his ability to bear mercury. In a patient who is careful and who can bear mercury fairly well, the following will be found a good solution to use in connection with the spray:

R. Hydrargyri oleatis, 5 per cent. . . . 1 drm.
Alboline, 2 oz.

Sig. Use twice daily.

Only a very small quantity need be used upon each occasion. It is only necessary to have a few drops sprayed, as the cloud-like form will disseminate the remedy over a very large area and secure just as good results as if more had been employed; two or three compressions of the bulb only are necessary, the patient being careful to open his mouth wide, secure the Atomizer between the teeth and breathe easy during the spray production. The instrument is inserted in the nostrils and one or two compressions of the bulb will be necessary.

For an aqueous solution the following is a good formula:

R. Hydrargyri bichloridi, 1 gr.
Ammoniaë muriat, 6 gr.
Aquaë distillatae, 2 oz.

M.

This is to be used in the same manner and with the same precautions as the other formula.

It is a good plan, when these local mercurial applications are made, to lower somewhat the dose of mercury internally, and for this reason. A large portion of mercury, applied locally, is apt to be absorbed, and by reducing the amount taken internally, so as to approximate the regular dose when the amount used locally is added to it, all danger of mercurial intoxication is avoided, the benefits of local and general mercurial medications are obtained, together with marked relief of the local disturbance occasioned by the mucous syphilides.

The method is also applicable to rectal and vaginal syphilides of the same nature as those we have indicated as occurring in the pharynx and nasal cavities, although I can not speak from personal experience in this respect.

St. LOUIS, 5 South Broadway.

Suggestion in Therapeutics.

RESUME OF A LECTURE DELIVERED BY DR. DUJARDIN-BEAUMETZ, MEMBER OF THE ACADEMY OF MEDICINE;
PHYSICIAN OF THE HOSPITAL COCHIN, PARIS.

[Translated from the *Bulletin Général de Thérapeutique*, January 15, by Mon. E. A. Quetin, Juge de Paix, Tonnerre, France.]

THE doctor says in substance:

This question stirs up scientific, psychologic and even religious problems so arduous, touching in so many points to the marvelous, that we find it difficult to place ourself upon a solid and really scientific ground, equally distant from skepticism and rashness.

The thoughts of man, whatever his habitat and his race, have always been influenced by a belief in a supernatural mysticism.

There are wonders unexplained in the sciences, and especially in medicine.

Without following the question of suggestion through all its phases in history, we may say that, at the start, among all nations the medical science was merely a science of suggestion. In India, we see suggestion at the basis, not only of their religion, but also of their rudimentary therapeutics; we find it in ancient Greece in the temples of Æsculapius. Indeed, it is identical to the practices of the sorcerers in our villages, and of the savages in Central Africa.

Leaving the ancient times and all sorcerers of the present day, suggestion has invaded our scientific world and taken with us a scientific direction under different names. We have the Spiritism or Occidental Fakirism of P. Gibier (Paris, 1887). One of the great scientists of England, William Crookes, is trying to demonstrate scientifically the reality of its phenomena. In fact, after Paracelsus, Van Helmont, Mesmer, down to Baron du Potet and Durville, we have now that doctrine of suggestion or magnetism professed by many adepts and believers.

A physician of Manchester, James Braid, in 1812, modified the general opinion on magnetism, showing that, by fixing the sight upon shining objects, phenomena might be produced which were denominated *hypnotism* or *braidism*.

The facts signalized by Braid remained misunderstood for a long time and neglected until we arrive at the communi-

cations of Lasègne, in 1865; of Charles Richet, in 1875; of Charcot, and finally of Dumontpallier (1881-84), when we see the question of hypnotism actually in discussion.

While experiences were going on at the hospital of *la Salpêtrière* (Paris), the same phenomena were studied at the Faculty of Nancy, under the direction of Professor Bernheim, and before him Liébault, who had professed that sleep and analogous states might be provoked by suggestion.

A controversy arose between the school of *la Salpêtrière* and that of Nancy as to the modes of provoking the phenomena of simple suggestion or through the various phases of hypnotism.

Our colleague, Luys, has lately applied the process of hypnotization as Braid understood it. It is fascination, by means of a shining object moving rapidly before the eyes of the persons to be influenced.

Whether we act by hypnotism, suggestion or fascination, phenomena are produced, with certain patients, placing them in a state of either catalepsy, lethargy or somnambulism.

In somnambulism, the person influenced will act according to the will of the operator, and that influence of suggestion lasts even in the waking state, with the consequences that we may well imagine.

Those phenomena are obtained in various ways described by the lecturer, who adds: "As to me, when I used hypnotization in my service, I brought sleep by a fixed look and by the occlusion of the eyes of my patient."

The awaking is also procured in many ways. The most common is by telling the patient to awake, in a loud voice of command; or also in blowing lightly upon the face of the hypnotized person.

Now, let us pass to a more important question, that of appreciating the results to be obtained from suggestion in the various pathologic conditions:

We must divide patients into three classes: In the first we place all hysterical persons, whatever be the form of the neurotic disorder, men as well as women, for the latest experiences of Charcot have demonstrated that man is just as liable to hysterics as woman; in the second class all neurasthenics, hypochondriacs and, in one word, all nervous people; in the last class all patients suffering from organic lesions, of which the nervous disorder is only a secondary symptom.

It is in the first group that suggestion, magnetism, hypnotization or fascination has produced its most positive effects, whatever be the mode employed, because hysteria is the soil upon which all pseudo-diseases will flourish and thrive; and we can understand that the operator will remove all accidents in such cases, by simple suggestion; nay, under the influence of the anæsthesia brought by suggestion, painful operations have been performed without any pains, as is well proven by the experiences of Mesnet, Auvard and others. But this can be expected only when there is no alteration in the point where the pain originates; for instance, suggestion could not silence the pain originating from a decayed tooth or a cancer of the uterus or of the stomach. There I disagree with Bernheim, who admits that the pains caused by the *ulcus rotundum* are tributary to suggestion.

The patients of the second group are so inconstant that they will consult everywhere, use every new remedy, try every doctrine, and be benefited lastingly nowhere, for their sickly fancies create constantly new imaginary pains, and suggestion can have but little influence on them.

With the patients of the third group, suggestion is limited to the moral influence which the physician may have over them, and sometimes it may be considerable, in giving them encouragement. Every new remedy may be said to enjoy a period of success that belongs to the domain of suggestion.

In what proportion are patients apt to be influenced by hypnotic suggestion? Liébault says that, in 1880, among 1,011 persons upon whom he experimented, at Nancy, only twenty-seven were refractory. I must confess that nothing similar has occurred here in our hospitals or in our practice; in fact, hysterical patients alone, as we stated above, have been clearly benefited by suggestion, and even among them some were refractory.

Is there danger in hypnotism? Whilst Bernheim, Liébault, Berillon and many more contend that there is no inconvenience in therapeutical suggestion, we see other physicians affirming that, in provoking hypnotic trances upon subjects predisposed to it, there is danger of aggravating the morbid symptoms, and of causing intense psychological disorders. Some Governments, Belgium for instance, after taking the advice of academic societies, have prohibited the practice of hypnotism.

In conclusion: Thanks to a more careful study of the phenomena of suggestion, we can to-day establish the basis of a psychotherapy; but this psychotherapy shall remain an exception in the practice of the medical art, if we confine it to the phenomena proper of hypnotism; for, as it was above demonstrated, from the creation of medicine to our days, suggestion—that is, the influence of the physician on his patient—had and will always have a considerable importance with the result of the prescribed medication. That is a fact, proceeding from the great laws of animal life, which ordain that certain beings should have influence over others. But, there shall always remain that great group of pathology comprising the maladies proper: pneumonia, typhoid fever, rheumatism, etc., * * * against which we shall have to use a special medication, in which hypnotism can have no place; and to suppose for one single instant that one might, by a word of command alone, remove the whole train of morbid symptoms, would be an illusion, a mistake.

Local Anæsthesia by Cocaine.

LECTURE BY PAUL RECLUS (PARIS).

[Translated for the CINCINNATI MEDICAL NEWS, from the French, by Dr. H. Illoway, Cincinnati, Ohio.]

GENTLEMEN:

I desire to call your attention to the great advantages that may be derived from the use of cocaine in surgery and its mode of application.

* * * * *

In over seven hundred cases in which I have used it, I have derived the greatest benefits; I can only praise it. I have never had any untoward effect even of the most trifling character. I consider it a most reliable and innocent analgesic, provided that it be well and prudently administered.

Cocaine may be used on the surface of mucous membranes and in the interior of the tissues.

I shall say but little of its use on mucous surfaces. The technique is very simple. A wad or tampon of hydrophobon cotton is dipped into a 2-5 per cent. solution of cocaine and applied to the mucous membrane for three or four minutes. You can then operate without causing pain, but the analgesia thus obtained is very transitory and very superficial.

I have had recourse to cocaine by simple contact, in several internal urethrotomies, without provoking the least pain. The operative technique is here also very simple; a maison-neuve catheter armed with its conductor is introduced into the urethra, then the needle of a Pravaz syringe filled with a two per cent. solution is passed down as far as possible into the groove of the catheter. The piston is pushed, a part of the liquid follows the gutter work and reaches the bladder, another part penetrates into the urethra, and insinuates itself between the catheter and the mucous membrane, which it anæsthetizes both in descending and in ascending the length of the canal.

I have in this manner been able many times to incise constrictions of every kind without causing the patient the least suffering.

Cocaine acts also by contact upon serous surfaces; and the benefit of this has been given to patients to be operated upon for hydrocele. Everybody knows how painful the injection of Tinct. Iod. into the tunica vaginalis is; the cocaine puts an end to this suffering. Two to three Pravaz syringefuls of a two to three per cent. cocaine solution are injected half an hour before the evacuation of the liquid.

When I desire to wash out an articulation in cases of chronic hyarthrosis, I always make use of cocaine. If it be the knee, for example, this is my mode of procedure. I plunge the needle of a Pravaz syringe from the outer side, above the patella, into the subtricipital cul-de-sac. It penetrates the skin and the subcutaneous cellular tissue, traverses the periarticular fibrous tissue, and finally reaches the cavity of the articulation. The piston is pushed methodically downward in the measure as the needle advances, leaves behind it a trail of cocaine, an anæsthetized route, which the large hydrocele trocar, which I shall plunge into the joint, will follow.

The same manœuvre from the inner side, below the patella, into the inferior and internal cul-de-sac, same interstitial injection, same injection into articulation, same puncture with the hydrocele trocar. I then adapt to the orifice of the first trocar a rubber tube armed at its free extremity with a glass reservoir containing a 2-4 per cent. boiled solution of carbolic acid. The liquid thus traverses the articulation, the surfaces of which it washes and flows out by the other trocar. I allow it to flow until the solution comes out perfectly clear and limpid; then nothing further remains

to be done but to remove the trocar, to immobilize the joint and to compress it by means of cotton and bandages. Generally my results are a cure in a few days without having caused the patient the least pain.

It is, however, in intradermic injection that cocaine is destined to render the greatest services. The interstitial injections are not very complicated, nevertheless the technique must be known, because if cocaine has failed to give good results, in many cases it is because the rules which govern this, though very simple, have not been observed. I shall explain them in a few words:

Let us suppose, for example, a tumor is to be removed. I have measured with the eye the place from which the cutaneous incision is to be made; the surgeon insinuates at one extremity of the line of incision the needle of his hypodermic syringe into the thickness of the skin, and just as he gradually advances in the tissue so he pushes the piston; the analgesic liquid flows out and anæsthetizes before the needle the route to be traversed.

If the line of incision is longer than the needle, then this is again plunged into the skin at a point in advance of that of previous puncture, and the same manoeuvre is repeated until the whole line to be traversed by the bistoury is rendered analgesic.

We must assure ourselves carefully that we are in the skin, as this is an essential condition, for the injections into the subcutaneous cellular tissue produce but an incomplete anæsthesia.

We can readily recognize whether the injections are made in the thickness of the skin, by the resistance experienced by the needle in traversing the close layers of the derm, by a certain elevation of the epidermis, which the injection produces over the track of the fluid, and the livid pallor which this elevation immediately takes on. This pale puffiness is due to the vaso-constricting action of the cocaine, which causes immediate contraction of the local capillaries.

We should wait three or four minutes after the injection before commencing the incision, but ordinarily, as soon as the elevation is apparent, we may at once commence the operation without fear of causing pain either by bistoury or thermocautery.

The incision should be made as nearly as possible in the center of the cocainized track, for the analgesic zone in the

track of the needle is not wider than three to four centimetres.

If we intend to make a deep operation, it is better to superpose several injections into the depths of the tissues, so as to better anæsthetize the various layers. Nevertheless, the insensibility produced by the intradermic injection extends far and deep, and frequently this sole injection will suffice, so that the cellular tissue and underlying soft parts may be torn and cut without any appreciable suffering being provoked. And I affirm that in following the above rules, there is not the least danger, and that the patient will not have the least pain, whilst at the same time still perceiving the sensation of contact.

The detractors of cocaine pretend—and this error is generally current—that it has no effect on inflamed tissue. This, however, is a very great mistake, for I myself have more than a hundred times proven the contrary, and an injection made well into the skin, inflamed by a lymphangitis, a phlegmon, an anthrax or a furuncle, will permit of incision being made without the provocation of the least pain.

It has also been insisted upon as a fact that cocaine had no analgesic effect upon bones; I myself was for a certain time of this opinion, for the trials made upon this structure were always complete failures. But I was afterwards convinced that I had made a mistake, and I found that the injection made beneath the periosteum anæsthetized perfectly bones of medium size, and that perfect analgesia could be produced for operations, as amputation of the fingers, of the toes, of the metacarpal and metatarsal bones.

It was also insisted upon that it was insufficient for the pains of thermocautery. But here we did not succeed because we did not know how to operate. If we operate quickly, we do not cause the least pain. The heat emitted by the heated platinum destroys already from a distance the reserve of cocaine in the tissues; and if we would desire to take up the diæresis at the point where it had been left, the sensibility reappears, although we may still be in the track of the injection.

We must, therefore, operate quickly, without coming back to the points over which the thermocautery has already passed. By obeying this rule, we have been able to make many cauterizations or operations with the thermocautery or galvano-cautery.

At the Hospital Hotel Dieu I succeeded thus in removing with the galvanic snare, in a patient over eighty-three years of age, the half of the tongue, infiltrated with epithelioma, and this without the patient feeling the least pain.

It has also been pretended that cocaine is inefficacious in the ano-rectal region, and that a sufficient degree of anæsthesia for the ablation of hæmorrhoids, for incision of a fistula, or dilatation of the anus, could not be obtained with it. I myself, at the outset of my trials, believed in this, but I was mistaken, as were many others, and with a certain skill in the technique I obtained perfectly satisfactory results.

This is how we must proceed for dilatation: After having introduced into the region of the sphincter a tampon of hydrophitous cotton, which has been allowed to imbibe a two per cent. solution of cocaine, and which is allowed to remain therein for several minutes, we then proceed to make an anæsthetic circle around the anal orifice, and we do this by making six injections equidistant from each other. We push the needle beneath the mucous membrane into the internal fibers of the sphincter, up to and just above the superior border. It is here especially that I insist upon a gradual flow, for the locality is rich in nerve fibers. Each injection consists of half a (Pravaz) syringeful of a two per cent. solution, a centigramme of cocaine for each injection—six centigrammes for the six injections. I can, after this, use the speculum of Trelat without provoking the least suffering.

Taking it for granted that the cocainized patient does not suffer, we can readily understand what immense advantages are to be derived from the local anæsthesia produced by cocaine. Firstly, it acts more quickly than chloroform, and is more easily administered. Furthermore, its use is never followed by the unpleasant after effects of chloroform—as nausea, vomiting, etc. Finally, the danger connected with its use is infinitely less than with chloroform, and it can be administered without fear to old people and those suffering with cardiac trouble.

Is cocaine really dangerous? Some one, about three years ago, pretended to have seen twenty-six cases of death by this alcaloid. But we do not know how such a table could be compiled. I have made a careful search with the aid of my interne, M. Isch. Wall, and my pupil, M. Delbose, for all the fatal accidents from cocaine; we have gone through the whole medical literature, embracing also that of

dentistry, and we could not collect more than four authentic cases of death imputable to cocaine.

Death in these four cases was, so to say, inevitable, in view of the enormous doses administered. One case received thirteen grains, and this was the smallest quantity of the four, the doses in the other three cases being eighteen grains, twenty grains and twenty-two grains. These are truly heroic doses, and as useless as they are dangerous. It is with this alcaloid as with all other remedies whose toxic properties in exaggerated doses cause death; even the aliments in too great a quantity may kill.

I began by using cocaine in foolishly large doses, but have abandoned them—not from any accidents which they have caused me—I have never had any untoward accidents—but because of the inutility of such large doses.

I formerly used five per cent. solutions, but since two years I have not used a stronger than two per cent. solution. This two per cent. solution gives us two centigrammes of cocaine (about $\frac{1}{3}$ grain) in each Pravaz syringeful. And the field of operation must be very large to demand more than seven syringefuls, equal to 14 centigrammes (two grains).

In the majority of my operations—and I speak of the more important ones—castration, radical cure of hydrocele or hernia, ablation of tumors, etc., it is very rare for me to inject more than 10 centigrammes (about $1\frac{1}{2}$ grains). In the ordinary cases four, six and eight centigrammes are amply sufficient.

Formerly I was not afraid to give 20 and 25 centigrammes (3 to $3\frac{1}{2}$ grains), but to-day, infected by the general terror which surrounds cocaine, I never surpass 15 centigrammes, and we must remember that when we incise the tissues, even in the center of the cocainized region, a part of the alcaloid is carried out by the blood flowing from the incised vessels.

I insist upon this point, that the solution used should be a two per cent. solution, for this is our safeguard in the use of this alcaloid. In fact, a long experience has many times demonstrated to me that there is not the least danger with the two per cent. solution; that no toxic symptoms are provoked, and that it can be used in larger doses than a more concentrated solution.

Sometime ago M. Verneuil made an injection of cocaine at the Hotel Dieu with a ten per cent. solution; he had

hardly injected four centigrammes when his patient was taken with alarming symptoms. And, it is well known that four centigrammes is a very moderate dose, and, in reality, harmless. The alarming symptoms provoked can therefore be explained only upon the ground of the greater concentration of the solution.

How can we explain this? It is probably with this as with the drinker, who is much more quickly intoxicated and more profoundly if he takes his alcoholic drink in concentrated form, than he would be by even a larger quantity if the same be diluted with water.

Nevertheless, it is an established fact that accidents may happen. The annals of dentistry are here to bear witness to this. How is it that the dentists have so many accidents? It was said once that it was because they operated so near the nerve centers. It has been also said that because their patients were always in the vertical position they were more liable to syncope.

For my part, aside from these causes, the greatest part of the accidents are emotional phenomena, due either to fear of the drug or of the operation. I myself, at the age of fourteen years, fell into a syncope from a simple vaccination. Many cases of death have been established as produced by this alone.

Consequently, we must carry to the account of cocaine all the accidents, simple or grave, which occur during its use, for fatal accidents have happened during operations not alone when cocaine was used, but also, and more frequently, with chloroform.

On the other hand, many accidents are imputed to chloroform for which it is not really accountable; for even before the discovery of this useful and powerful anæsthetic, numerous patients succumbed during the operation itself, either from shock or from fright.

Up till to-day I have made more than eleven hundred injections of cocaine in different cases, and I have never had a serious accident; and since I use the two per cent. solution, not alone that I have not had any alarming symptoms, but I have not even seen the slightest manifestation of cocaine intoxication, though always obtaining perfect local anæsthesia.

Finally, I repeat as a final conclusion, that cocaine, handled prudently and carefully, is a powerful analgesic, which daily renders surgery the greatest service.

Proceedings of Societies.

Gynecological and Obstetrical Society of Baltimore— January Meeting.

Reported for the CINCINNATI MEDICAL NEWS.

THE PRESIDENT, DR. HENRY M. WILSON, IN THE CHAIR.

DR. W. P. CHUNN related an instance of apparent growth of the placenta after labor.

The patient was twenty-eight years old, and had been married five years. She had had no children at full term, but had had three miscarriages. The first and second miscarriage occurred at about the fourth month of gestation. The last miscarriage occurred about May 10, 1890. She had missed one period and believed herself to be about six weeks pregnant. On the 10th of May she began to have bearing-down pains and hemorrhage, with the expulsion of blood-clots, lasting some three or four days. Then the pain subsided, the hemorrhage ceased, and I regarded the uterus as empty. On the 12th of June, however, she was again seized with violent pains, and during the night was delivered of a placental mass larger than a man's fist, which I saw the next morning. The patient, as well as myself, was surprised. The foetus was searched for, but no sign of it found.

Dr. Thos. A. Ashby: I have seen a somewhat similar case. The patient began to have hemorrhages about the sixth week of gestation. She was not under my care at that time, but I was called in four weeks subsequently, and she was then in the act of throwing off the foetus. At the time of its removal the foetus was apparently at the sixth or seventh week of gestation, and partly decomposed. The placenta was not affected by decomposition. Before I saw her she had been going around bleeding from this cause and was not aware that she was about to abort. She had had five miscarriages between the sixth and eighth week in twenty-eight months, so she stated.

Dr. G. W. Miltenberger: I have known the whole ovum to be retained for months after the death of the foetus. In a recent case the contents of the uterus were not thrown off till full term, though the foetus was dead at the third month. I can not understand the growth of the placenta in utero

after the death of the child, but I can conceive of the growth of the placenta outside the uterus on account of the peculiar relation of the blood vessels.

Dr. L. E. Neale: I think it is very unfortunate that the specimen is not presented. The placenta is not developed at the sixth week of pregnancy. The conditions in extra-uterine pregnancy are very different from those in intra-uterine pregnancy, and what is true of one regarding placental development is not true of the other. I see nothing in the history of the case opposed to the belief that it was a very ordinary case of abortion (not miscarriage) with escape of the embryo and more or less complete retention of the sac, chiefly chorion, that might have been removed by the curette long before it was ultimately expelled.

Dr. L. E. Neale read a paper upon "The Indications for Cesarean Section." This paper is intended to stimulate interest in and discussion of the subject, Cesarean Section *vs.* Craniotomy on the living child, upon which subject a series of papers will be presented by the members of the society. It refers particularly to the indications for the section, and is a plea for this operation. If it serves to arouse interest in examining pelves or increase hesitancy in destroying children, the labor is not in vain. Craniotomy upon the living foetus is believed justifiable, but only as a dire necessity, not as an elective procedure, and should not be resorted to where there is a reasonable probability of success by the section and the uncoerced consent of the mother can be obtained. No man is compelled to do craniotomy upon the living foetus solely upon the choice of the patient or her friends.

In answer to the question, "What would you do if the patient were your wife, your sister or a near relative?" He believed practically this must be a matter for each man's conscience, over which no dogmatic rule of science can or should have sway.

If seen early enough, the induction of premature labor at the thirty-second to thirty-fourth week by the method of Krause, was a very strong antagonist to craniotomy upon the living foetus. The range for this operation should not extend to a conjugata vera below $2\frac{3}{4}$ inches (Tem) or to one above $3\frac{1}{2}$ inches (8.75).

The indications for the conservative section included all insurmountable obstructions to the delivery of the living and viable child per vias naturales. They include tumors, pelvic

exudations, hypertrophic elongation of the cervix, cicatrices, stenoses, tetanus uteri, falciform, uterine contractions, etc. He believed general opinion placed the limit for the absolute indication at a conjugata vera of $1\frac{1}{2}$ inches or 3.75 cm., and the relative indication extended from that point up to an undetermined conjugata vera measurement, and included many other conditions besides pelvic contractions. Other things being favorable, a $2\frac{1}{2}$ inch or 6.25 cm. conjugata vera (Harris), 3 inch or 7.5 cm. conjugata vera (Lusk), called for section rather than craniotomy, but be warned against relying *entirely* upon pelvimetry in the relative indication.

In contracted pelves he preferred version to forceps when both were practicable. He insisted upon pelvimetry and briefly outlined the methods. He believed it was chiefly by this means we could determine the indications for the section.

A conjugata vera of 3 inches—7.5 cm.—was generally admitted to be the least through which a living child of normal proportions could pass, and, as Lusk maintained, if other diameters were lessened or the contraction was not limited to the brim, it might require a conjugata vera of $3\frac{1}{2}$ inches—8 cm.—or more. No hard and fast line could be given. Each case must be judged alone. The relative size of the head, its resistance, the past history, the uncoerced consent, the general condition and surroundings of the patient, etc., were all important factors in the relative indication.

The life of the child was not “purely impersonal and scientific,” but eminently personal and practical, and he believed the mother should run a reasonable risk in its interest. The life-saving of craniotomy could never be as great as that of Cesarean section, for it started with a necessary mortality of 50 per cent., or half the lives at stake. But, aside from all argument and comparative statistics, the section was decidedly restricting craniotomy. All deprecate the repeated performance of craniotomy on the same woman. He accepted Carl Brann's rules for the relative indication.

Craniotomy was safer for the mother than section, but piece-meal extraction was equally, if not more, dangerous. Ex. 92; conjugata vera, $2\frac{1}{2}$ inches—6.25 cm.—or less.

If conservative delivery, p. v. n., had been attempted and failed, this was a strong point in favor of craniotomy and against the section under these increased dangers.

He strongly deprecated conservative tampering and then

resorting to the section; many lives had been thus sacrificed. If we desired success we must make the section an elective operation, and not a procedure of dire necessity.

Dr. Miltenberger: With regard to the paper of Dr. Neale's, confined, as it is, to the indications for the Cesarean section, there is nothing which I would controvert. Under the absolute or positive indications, as laid down, there can be no question. The confusion and discrepancy of opinion have arisen from want of definiteness and clearness as to the relative indications.

If we take the statistics of craniotomy generally, including all cases, we get no positive resulting data to guide us. Where the pelvis is so contracted as to necessitate the piece-meal extraction of the fœtus, it is recognized, undoubtedly, as the most serious of obstetric operations, and more dangerous than Cesarean section.

Where, on the other hand, craniotomy alone is required, the operation is simple, and the danger to the mother, in proper hands, should not be greater than from the application of the forceps. In my individual experience on my own patients, I have been obliged to resort to craniotomy but twice in fifty years, and in these, as well as in those in consultation practice, the mothers have all recovered.

Now, it is just in this latter class that the doubt arises. The smallest conjugata vera diameter through which a living child has been expelled is 3 inches, or, as has been claimed, $2\frac{3}{4}$ inches; but with this we can not expect to save the child through the natural passages.

But whether with this or a little more available space, we must recognize the prime and absolute importance, as the Doctor states, of pelvimetry, and to its thorough practical study and application must we mainly look for increased certainty. Especially does this hold as to internal pelvimetry, the best instrument, by far, being the hand of the obstetrist.

Now, while it is true the measure here of the conjugata vera by the finger may not be perfectly accurate, and we require also to learn the available space in the transverse diameter, yet with care it sufficiently approximates the truth for our purpose.

But, on the other hand, as the Doctor has said, we can not accurately determine the size of the child's head, its degree of ossification, etc. It is true by bi-manual examination we can approximate the truth, but not exactly obtain

it. I have known an accomplished accoucheur persist for a length of time in the use of forceps before he recognized that he was dealing with a hydrocephalic head. Thus both the factors have elements of uncertainty.

It is just in this class of cases that the doubt and uncertainty arise. When the practical obstetrict meets with a case of dystocia from this cause, by internal measurement he satisfies himself, as far as possible, he has 3 inches of available space in the conjugata vera, or even above this, without a full knowledge of the size of the foetal head, he naturally applies the forceps or proceeds to turn—and not improperly—but if he fails he has already violated the first fundamental law in Cesareotomy, to resort at first to the knife, without any previous operative manipulation; if such manipulation has been at all prolonged, the choice is not between craniotomy and Cesarean section, but between craniotomy and a Porro. Fortunately, pelves contracted to this extent are rare in this country, particularly in the higher walks of life.

The operation of Cesareotomy is, in itself, sufficiently simple, and the modern section is, undoubtedly, one of the greatest advances in modern obstetricy, while its success constitutes a brilliant epoch in our recent history. In the hands of those skilled in its technique and taught and trained by experience, there is every reason to trust and believe that the modern Saenger will extend still further its successes, and that as an operator gains tact and knowledge with every case with which he deals, and as a part of his success must depend upon his absolute command of his patient and her surroundings, it is most likely the old picture will be reversed, and with our septic and antiseptic precautions, hospitals will offer a smaller rate of mortality than private practice.

Fully realizing, as I do, the success of the modern Saenger, and the lessened mortality rate which has been achieved, yet we know that no abdominal section is entirely free from danger, and, as I said, in these cases of relative indication they may be claimed to be almost, if not entirely, void of peril with craniotomy.

I do not hesitate to declare that I should prefer on my own wife, as the safer for her, craniotomy to Cesarean section in such a case, and am therefore bound to extend to others—my patients—the Golden Rule, “to do unto others as I would they should do unto me.”

I am therefore forced to the opinion that Cesarean section will not completely supplant the old operation, and that there still remains a field, although markedly limited, for craniotomy on the living child.

Dr. J. Whitridge Williams: I am sure that all of us are greatly indebted to Dr. Neale for the very clear manner in which he has set forth the indication for the operation, and I almost entirely agree with him.

The absolute indication I would place at 5 to 5½ cm. or 3 inches, and the upper limit for the relative indication at 7½ cm. or 3 inches. Within these limits, unless the child be abnormally small, there should be no question as to the use of forceps, and the question to be decided is whether craniotomy or Cesarean section should be done.

Theoretically, I would choose the section in all cases that appeared favorable, but practically I might waive my theory in the case of a primiparæ who had not been examined previous to labor; for in that case it might appear very hard to submit a young woman to such a risk without any previous intimation of her danger.

But if I performed craniotomy under these circumstances, I would warn her that in becoming pregnant again she would take the responsibility of the child's life upon herself, and that I would refuse to perforate in subsequent pregnancies.

The mortality of the operation need not dismay us, for Munchmeyer has lately reported the latest statistics of Leopold, in which he reports twenty-eight Saenger operations, with the loss of three mothers and one child, and seven Porro operations, with no maternal deaths.

Dr. B. B. Browne: I had a case recently upon whom I did Cesarean section. The woman was twenty-seven years of age. She had had one child. Her labor was two years ago, when she had convulsions, and a craniotomy was done. As a result of injury received at this time the vagina and uterus sloughed, and there was complete atresia of the vagina. This atresia was afterward opened up, and she became pregnant.

The vagina was contracted by cicatricial bands, and an opening could be felt in the side of the cervix, but to the left of the opening was a cup-sloped cavity, which might have been the old cervix.

She was not sure of the time of impregnation. She was swollen, and her urine solidified with albumen upon heating.

Labor pains began December 20th, and continued for one or two days, but there was no dilatation. She came to the hospital December 22d. She had severe uterine contractions that day, and came for the purpose of having Cesarean section done. But next day the pain had all gone. The night of January 1st the water broke, and severe pains began. The cicatricial bands about the cervix were cut, and Elliot's forceps were introduced. Both blades of Tournier's forceps could not be gotten on. After several efforts, I concluded that she could not be delivered in that way.

In the morning the foetal heart was distinct, in the afternoon it was feeble. The section was made without difficulty. The placenta was attached in front. The child could not be resuscitated. The placenta was readily detached, and the uterus was cleaned out and closed by the Saenger method.

The operation was done on Friday, and the patient did well until the following Tuesday, when she sank rapidly, and died in a few hours.

The woman had grave kidney disease, and had little chance of recovery on that account.

In this case several things are to be considered:

1. The woman was perfectly willing for the operation.
2. Her life, from the condition of her kidneys, was not insurable, and the child had a good chance of living.
3. She had much difficulty in the former craniotomy, and barely escaped with her life.

Dr. Ashby: I have had the good fortune to witness two Cesarean sections. One, the case of Dr. J. G. Jay of this city several years ago, and the recent case reported by Dr. Browne. I was impressed with the ease with which the operation can be done. Its mechanical execution is certainly much less difficult than that necessitated by many intra-abdominal operations. Hemorrhage is easily controlled, and the closure of the uterine wound is not a difficult undertaking.

In the case of Dr. Jay, the mother made a prompt recovery, and the child perished simply because of the unavoidable delay which was experienced before an attempt at its removal was made. Its death had, in my opinion, no relation to the operation, but to causes which antedated the section. I am convinced in the case of Dr. Browne the child could have been saved had no other method of delivery been attempted. The section, I think, bore no relation to

its death. In this case the operation was skillfully done, and I am inclined to believe that the mother's death should be assigned chiefly to her kidney complications. She was a bad subject, but bore the section well.

My opinion of the Cesarean section is altogether favorable. It has come to stay, and, with an improved technique and larger experience, could be approached with less hesitation. The operation of the future will be approached without delay, and before other methods of delivery have been employed.

The important indication for the operation rests upon careful pelvic measurements and discrimination in advance of any obstetric interference, of the impossibility of delivery by version or forceps. If this is done, a section will be approached under its most favorable aspects, and its results will be far more satisfactory.

I agree with Dr. Miltenberger in that personally I would prefer craniotomy if the patient were a member of my own family; but, upon scientific grounds, I would not hesitate to operate did my patient and her friends elect this procedure, having satisfied my own mind that a living child could not be born in any other way.

I think it unfortunate that the physician in charge of these cases should not have the moral support of the public and profession in the selection of the section in advance of attempts at other methods of delivery. Out of deference to a sentiment, he often feels forced to use the forceps and version where his own judgment was in favor of the section. Valuable time is thus lost, and the lives of both mother and child endangered, if not sacrificed.

Dr. Neale: As no points were raised against the paper, I have nothing to say in its defense. I did examine Dr. Browne's case, and told him, in my opinion, it was no case for the section. The chief obstruction was in the soft parts; that in the pelvis was very slight, if any. I thought it possible to deliver the child alive, *p. v. n.*, but was sure it could be readily extracted after craniotomy. Owing to the kidney complication, the mother was in a most unfavorable condition for the section, and, for that matter, the child also; therefore, I advised against this operation.

However, after once beginning a conservative delivery, *p. v. n.*, which was persisted in too long (thirty minutes), I certainly never should have resorted to the section in that case, with both child and mother in the then most unfavora-

ble condition, but would have delivered at once by craniotomy.

I totally and emphatically differ from Dr. Ashby that any conscientious obstetrician should ever be forced to resort to craniotomy by the moral suasion of the patient or her friends. Such teaching would be extremely pernicious.

The sentimental question of what one should do if the patient were his wife, etc., is a matter of individual conscience, and not open to scientific discussion before a medical society.

I again request the fellows not to let the matter rest where we have it to-night. I wish to emphasize the fact that I have purposely avoided any reference to the religious aspect of this question, as I do not believe this point open for scientific discussion before a medical society.

WM. P. GARDNER, Secretary.

Hydrogen Dioxide.

Condensed for MEDICAL NEWS.

DR. JOHN AULDE, of Philadelphia, has an article in a recent number of the *New York Medical Journal* on "Hydrogen Dioxide." He says that within the past ten years the use of hydrogen dioxide (peroxide of hydrogen) has become quite general among practitioners whose business has led them to give special attention to some particular class of disorders. Many, however, have not availed themselves of the benefits afforded by the preparation, owing to the expense and care required in looking after details, together with the uncertainty which attended its employment. These difficulties no longer exist.

Although the *furor* for antiseptics continues unabated, the true position of oxygen has been ignored by those who should have given it their first attention. Carbolic acid first met with great favor, but it has given place to a number of other antiseptics, some of which are safer, but none more useful; some are more efficient, but, as usually employed, are far more dangerous. As the foundation for asepsis rests upon absolute cleanliness, Dr. Aulde asserts, so the foundation for antiseptics must rest upon an equally safe basis as regards the patient. The only agent, he declares, known at the present time which fully meets our requirements is

oxygen in some of its forms. While the spores of anthrax bacilli resist our most poisonous products—such as solutions of hydrochloric acid (two per cent.), boric and salicylic acids in concentrated solutions—oxygenated water alone, in sufficient quantity, was shown by Paul Bert and Regnard to possess the power of destroying the bacteria.

The wonderful properties of ozone, he proceeds to say, are but partly understood; like some other powerful agents, it can not be safely handled, but it gives great promise of usefulness in the future. It is stated that ozone is but an allotropic form of oxygen, and is identical with hydrogen dioxide. For all practical purposes, from a therapeutic standpoint, they may be considered substantially the same. We have, then, in it a remedy which possesses remarkable properties as a bactericide, that is perfectly harmless when brought into contact with healthy tissues. The indications, therefore, for its use in the treatment of disease, should be studied. Dr. Aulde, however, first speaks with reference to the causes which have contributed to prevent its universal employment by physicians.

(1.) The *expense* of an outfit and material for administration of this agent, he says, need not exceed five dollars for sufficient to cover a period of from six weeks to two months. The medicinal peroxide (there is a commercial peroxide which is used for bleaching purposes, not suitable for therapeutic purposes) can be purchased in original packages at about the cost of filling a prescription at a first-class drug-store. An atomizer and vaporizer combined, especially required for this substance, costs no more than one equally complete for ordinary use.

(2.) The *inconveniences* attending the exhibition are purely imaginary. The use of the instruments requires but little manual dexterity, the instructions being easily comprehended by the merest tyro.

(3.) The *uncertainty* following the employment arises from causes which can be easily provided against. Sometimes an unsuitable preparation is used; in other cases the specimen has not been properly preserved.

Dr. Aulde says that the notions are altogether fanciful held by some that by the use of hydrogen dioxide there is danger of hyperoxygenation and a consequent increased rapidity of combustion. Erlich teaches that all protoplasm is enveloped by cell-juice (paraplast), which expands or contracts in proportion to the demand of the cell for oxygen.

Contraction of the cell takes place when there is no demand for oxygen, and at the same moment the increased thickness of the paraplasm prevents the absorption of oxygen. Alternate contraction and distention of the cell affects the thickness of the layer of cell-juice and increases or decreases cell combustion; in other words, it prevents the too rapid oxidation of protoplasm.

In the light of the foregoing demonstration, says Dr. Aulde, there can be no hesitancy in ascribing the therapeutical value of oxygen, in whatever form employed, to its influence upon cell activity. The entire organism being composed of cells, the conclusion is inevitable that all agents which increase the normal function of the cell increase in like manner the resistance of the organism to the inroads of disease. This is further exemplified by the active oxidation (combustion) which takes place when the peroxide is brought into contact with unhealthy tissues, and still no deleterious action is noticeable upon the normal structures, a statement of fact which can be applied to no other known antiseptic. Pus and all other unhealthy discharges are promptly destroyed, the affected structures being left clean and perfectly free from micro-organisms.

Therapeutics.—From the peroxide of hydrogen we may obtain, in the form of a vapor or spray, the therapeutic effects of nascent oxygen, and as a surgical application or antibacterial substance this product is far superior to the gas itself. Used in the form of a vapor by inhalation, it increases the secondary assimilation by favoring the elimination of excrementitious products through the stimulating effect upon internal respiration. Just as pure mountain air arouses the activity of functions which have been depressed and promotes health, so oxygen evolved in this manner increases tissue change and prevents the suboxidation which attends upon the arrest of cell function. Oxygen is a tissue-builder as well as an oxidizer of carbonaceous and excrementitious products. When it is introduced into the alimentary tract, abdominal fermentations are arrested by the destruction of the germs which produce them; unhealthy mucous secretions are destroyed, while the vitality of the cells lining the walls of the intestine is augmented, and their power against the absorption of ptomaines and leucomaines greatly increased. The surgeon will find the peroxide an efficient and most convenient antiseptic, as it can be freely used in cavities, in discharging sinuses, and upon the most delicate

tissues, without danger of producing the slightest irritation. In all cases of threatened collapse, in low conditions of the system, and during convalescence from severe illness, the physician should bear in mind the wonderful revitalizing properties of this remedy. Perhaps the reader will gain a more practical idea of the applications by a reference to some of the more prominent indications, and I shall briefly pass in review some of the diseases in which it may be used with beneficial results.

In *anæmia* and *chlorosis*, along with suitable diet and exercise as adjuvants, the inhalations will prove most valuable; appetite increases, digestion improves, and there is a marked change for the better in the appearance and in strength. The feeling of *malaise* disappears within a few days after beginning treatment, listlessness is banished, and the patient takes an active interest in amusements which require considerable exercise, and seemingly with the greatest zest. *Erysipelas* is a disease in which the vapor may be used internally and the spray locally, apparently with the best results, as the progress of the disease is arrested by destroying the germs, increased resistance being given at the same time to the organism. In *septicæmia*, along with diffusible stimulants and suitable vascular tonics, it will be found an efficient adjuvant, and whenever it can be used locally in this affection the results will be brilliant indeed. *Lithæmia*, accompanied by cough, highly acid urine, with large quantities of uric acid and a diminution of the normal urea, is quickly benefitted by the exhibition of the vapor. It is also a valuable adjuvant in the treatment of *rheumatism*, but with it should be combined the liberal use of alkaline waters, a judiciously selected dietary, and appropriate medication. It is also of decided benefit in the treatment of *diabetes mellitus* and in *albuminuria*, when it may be presumed to have some active influence in eliminating morbid products.

Since it has been determined that in *yellow fever* and *cholera* the poison germ is found only in the intestine, the peroxide promises to afford exceptional relief in these diseases. When it is introduced into the rectum, the heat of the body will cause oxygen gas to be evolved, while the local action of the drug will destroy all unhealthy products which may be present in the lower bowel. The nascent oxygen will be taken up by the absorbent structures and enter the general circulation; but if we accept the doctrine of phagocytosis, it will do even more than this, by reason of

its stimulating action upon the modified white corpuscles, which are now regarded as the special enemies of bacteria escaping through the walls of the intestines. And for the same reason it may be used with advantage as a lavement in the treatment of *diarrhœa*, dysentery, and in typhoid fever. In the latter disease I have used the pure oxygen gas with very great satisfaction, and have found a solution of the peroxide superior as a mouth wash during the progress of this most tedious disorder.

The peroxide should be used in all forms of *indigestion*, more especially when the stomach is weak and depressed to such an extent that the usual antiseptics are not well tolerated. Those who use it once for the relief of indigestion, gastritis, gastralgia, and for the arrest of fermentation or an abnormal flow of mucus, will have no cause to regret the selection. A large number of *cutaneous affections* are dependent upon an unhealthy condition of the alimentary tract, such as urticaria, eczema, etc., and of course are benefited by the use of the peroxide.

Pulmonary affections have long claimed the attention of those who dabbled with oxygen inhalations, and it is in this class of cases where faithful attention to details will produce most marked effects, although I can not be convinced that any medicament in itself can arrest the progress of the disease. The continued use of the peroxide internally improves the primary assimilation; the regular and systematic inhalation of the vapor will not only improve the secondary assimilation, but will also destroy any morbid products with which it comes into contact in the pulmonary tissues, and, judging from my own experience with this agent, I have no hesitancy in saying that its value is not yet appreciated by a large number of physicians who, with it, might be the means of prolonging human life. My observation with the vapor and spray in *asthmatic conditions* have been surprising, and I have found them of signal service in meeting emergencies, such as asphyxia from coal gas, sudden collapse from hemorrhage, typhoid and other fevers. The long continued use of the vapor has a marked effect in restoring the resiliency of the air-vesicles in *emphysema* when it occurs along with asthma in young persons. A gentleman now under treatment has suffered from asthma since he was six weeks old, and is now twenty-five, but under this treatment he has gained weight, is able to sleep regularly every night, and has increased sixteen pounds in weight during the past three weeks, while the

chest measurement has appreciably decreased. This method of treatment is valuable in *phthisis* at all stages, but it should be used as an adjuvant to other treatment and attention given to diet. In this connection should be mentioned the usefulness of the vapor in the treatment of bronchitis, subacute and chronic, and at the same time the value of aborting attacks of acute catarrh.

Inhalations of the vapor will prove useful as an adjuvant in neuralgia, anemic headaches, general debility, malarial toxemia, and corpulence combined with diet adapted to the various disorders mentioned.

The gynecologist will find numerous applications for this agent.

Dr. Aulde speaks in high terms of Marchand's peroxide of hydrogen (medicinal). It is commended also by numerous well-known authors and contributors to medical literature. We would mention a number of them, but we have not space.

Selections.

Minor Uterine Surgery.

BY CHARLES P. NOBLE, M.D.

A Paper read before the Philadelphia Obstetrical Society, December 4, 1890.

FOR several years the attention of gynecologists has been so largely occupied with abdominal surgery, and particularly with the diseases of the Fallopian tubes, that but little has been said concerning the diseases peculiar to the uterus. It may be supposed by some that the reason so little has been heard of the uterus and its diseases, is that the labors of the past have placed our knowledge of these subjects upon an enduring basis. I am satisfied, however, that the true reason has been indicated above, and am the more convinced of it by the recent appearance of a paper absolutely denying the truth of the teachings of the past concerning, more especially the treatment of diseases of the uterus, and attributing evils to the measures employed greater than the good they have been designed to accomplish. In view of the immense strides which have been made in our appreciation of the diseases of women, especially those of an in-

flammatory character, in the last ten years, and of the very different light in which diseases of the uterus now appear as contrasted with former years, it has seemed to me that it will be profitable to review the subject at this time. The ground to be covered is so considerable that I shall present my views concisely and of necessity somewhat dogmatically, so as not to consume your time unduly. Presented in this way, I hope the subject will elicit full discussion, as I consider it one of the most important and suggestive in gynecology.

Before treating of the individual diseases of the uterus requiring surgery, it will be well to consider the diseases of the uterus as a whole. It can not be too strongly insisted upon that a very sharp distinction should be made between diseases of the uterus themselves and diseases of the uterus complicating, or complicated by, diseases of the uterine appendages. This is the key to the situation, and upon a right appreciation of this fact depends success or failure, or even disaster, in the management of this class of cases. Uncomplicated disease of the uterus, barring neoplasms, seldom or never threaten life, and belong to the minor ailments of women. Where the uterine malady is complicated by inflammation of the uterine appendages, the conditions are essentially different. The disease of the appendages overshadows the disease of the uterus, which must be nearly or quite disregarded. For were it possible to cure the uterine malady without modifying the disease of the ovaries or Fallopian tubes, little would be accomplished, as the more serious disease would remain. But this is not all, for experience has amply shown that to tamper with the uterus, particularly by operation or by intra-uterine applications, in the presence of complicating tubo-ovarian inflammation, is a most dangerous thing, liable to set up acute pelvic or general peritonitis. Hence it should be laid down as a rule that operation upon or manipulation of the uterus is contraindicated in all cases in which tubo-ovarian inflammation exists. The contraindication becomes the more absolute the greater the gravity of the complicating disease of the appendages.

The experience of the past has shown the truth of the foregoing statements, and the knowledge of the present concerning the nature of pelvic inflammation has rendered the whole subject easy of comprehension. Formerly, various explanations were offered, some of them quite fantas-

tic, as to the occurrence of pelvic inflammation following manipulation of or operation upon the uterus when "fixed," or in the presence of "cellulitis" or of "thickening." Now we know it is due to the rupture of intra-peritoneal adhesions and the escape of septic material from the diseased appendages.

The Uterine Sound.—I have but little to say in commendation of the uterine sound. Unquestionably it does far more harm than good as used to-day. I believe that its field of usefulness is very limited. For the purposes for which the sound is ordinarily used, it is an unnecessary instrument. Bimanual examination teaches the size, shape, position and mobility of the uterus far more accurately than the sound, and without injury to the patient. The text-books say that the use of the sound should be preceded by bimanual examination to determine the above questions and the presence or absence of pelvic inflammation. If this be so, and the facts be determined, what is to be gained by the use of the sound? More or less uterine colic, and perhaps an acute salpingitis, when a dirty sound has been passed into a healthy uterus, or a clean sound passed with some force into a uterus in the presence of tubal inflammation. Unquestionably, the use of the sound has no place in the determination of the foregoing facts concerning the uterus. Likewise, I would condemn the use of the sound as a uterine repositor. Mobile uteri can be repositied by Schultze's method, and fixed uteri should be left alone. The sound is useful in determining the potency of the uterine canal when this is in doubt; and may be useful in the differential diagnosis of obscure morbid conditions in the pelvis, but I am convinced that the facts apparently determined by its use are often illusory, and that the practitioner who least relies upon it will make fewest mistakes in diagnosis. The sound may be used to determine the presence of fungosities within the uterus; but the history of uterine hemorrhages and leucorrhea, with the absence of disease outside the uterus, makes the diagnosis so certain as to obviate the necessity for its use. The diagnosis and cure can be made with the curette.

Intra-uterine Medication.—I feel convinced that intra-uterine medication has been much abused, and that the cases are extremely rare which require or are benefited by the application of a medicament within the internal os uteri. Intra-uterine applications have been recommended for chronic

endometritis and chronic metritis. When uterine leucorrhea established the diagnosis of endometritis, and the same, with enlargement and tenderness of the uterus, not due to subinvolution or neoplasms, established the diagnosis of chronic metritis, these diseases were said to be very common—indeed, the most frequent diseases of women. Hence, intra-uterine medication became a routine practice. If I am to judge from my own experience, uncomplicated chronic endometritis and metritis are not frequently met with. As an illustration, by going over a hundred cases in my case-book, and selecting uncomplicated cases, I find seven. If the cases of laceration of the cervix, with erosion, etc., were added, the list would be considerably increased. But in by far the largest number of cases these morbid conditions exist in relation with inflammatory affections of the uterine appendages, preceding and causing the tubo-ovarian disease, and later being kept up by it.

In the presence of the tubo-ovarian inflammation it is now generally accepted that intra-uterine applications should not be made. They can do no good, and may do great harm. Fungoid endometritis and septic endometritis following incomplete abortion, require the curette. Excluding the foregoing, and cases of endometritis and metritis complicating laceration of the cervix, few cases remain for intra-uterine medication. And I am far from convinced that this small class can not be more efficiently treated and more quickly cured by the dilatation of the cervix under anesthesia with thorough curetting of the uterine canal with the sharp curette. During the past year I have thought it advisable to make applications to the whole uterine canal in three cases. One, a case of chronic endometritis in a virgin, was cured. The second, also a case of chronic endometritis in a woman the victim of syphilis years before, was improved by intra-uterine medication, and was cured when mercury and iodide of potassium were given by the mouth, in addition. The third, a case of small fibroid tumor, with menorrhagia, was made distinctly worse.

Looking back over my past results, I feel less and less inclined to make intra-uterine applications. Formerly I made applications of Churchill's tincture of iodine and solutions of nitrate of silver to the endometrium almost daily. Before I appreciated the dangers of the practice and its contraindications, salpingitis and peritonitis were "lighted up" in a number of cases. Fortunately, no deaths resulted.

Since I have abandoned the routine use of intra-uterine medication in disease of the pelvic organs accompanied by uterine leucorrhea, my patients have been far happier (as uterine colic is only a memory), and I am satisfied that the influence of treatment has been more favorable than in former years.

Dilatation of the Cervix.—Dilatation of the cervix is advised for the cure of obstructive dysmenorrhea and sterility due to flexions of the uterus (usually so-called congenital ante flexion), or to stenosis of the cervical canal, congenital or acquired; also as a step in the removal of polypi, small fibroid tumors, and the retained products of pregnancy, and as a preliminary to the use of the curette. In selected cases I am heartily in accord with this advice. It is not possible to discuss these questions now; but the important thing is that cases of uterine disease are to be selected for dilatation, and not cases of tubo-ovarian inflammation. In such cases, when done with full antiseptic precautions under anesthesia, dilatation of the uterus is practically without danger, immediate or remote, and has given very satisfactory results in my hands.

The mistake of regarding cases of so-called acquired ante flexion, due to peritoneal adhesions or shortening of the utero-sacral ligaments, as cases of uterine disease, is particularly to be guarded against. The folly of expecting to benefit inflammation of the peritoneum or of the uterine appendages by dilating the cervix is apparent; and I am convinced that all the disasters following dilatation of the cervix are to be attributed either to this error in practice or to poor antisepsis.

Rapid dilatation with steel dilators has always been employed, the pattern of Goodell having been commonly used. I have never seen a tent introduced into the cervical canal; nor have I seen the hard rubber dilator used.

The Curette.—The uterine curette is a most valuable instrument and is indispensable in the treatment of uterine fungosities and for the removal of the diseased endometrium in certain cases of menorrhagia. I believe it capable of rendering good service in the treatment of certain cases of congestive and obstructive dysmenorrhea—in which the seat of pain is in the uterus, and the cause, morbid processes taking place therein—by removing the endometrium, particularly near the internal os. After incomplete miscarriages, and in septic puerperal endometritis, the curette is useful to remove

necrotic tissue; but in these cases its use should be preceded by the finger, used as a curette, by which alone can the state of the uterine cavity be determined. In such cases the finger is the best curette. In all cases I precede the curetting with dilatation of the cervix and follow it with the intra-uterine douche and intra-uterine iodoform gauze packing, which acts as a capillary drain.

In cases of chronic endometritis without complication, dilatation and curetting will either effect a cure or greatly facilitate subsequent intra-uterine medication.

In curetting, full antisepsis should be maintained, and the same care be used to select uncomplicated uterine cases. Anesthesia is essential to thoroughness. The curettes of Martin and Schroeder have been used. The dull curette should be regarded more as an instrument of diagnosis. It is useful in cleaning the uterine cavity of debris before using the douche. It also finds a place in puerperal septic endometritis.

Laceration of the Cervix.—Probably no subject in gynecology has excited more discussion than that of the pathological importance and the treatment of laceration of the cervix. I am in accord with those who regard laceration of the cervix as a lesion of importance in the causation of pelvic disease, and the operation devised by Emmet for its repair as a useful addition to surgery. Certainly many lacerations of the cervix, occurring during labor, heal spontaneously during the lying-in, and are of no practical consequence to the puerpera; others heal more or less perfectly, and, involution of the uterus taking place fully, no ill consequences follow. But the history of laceration of the cervix in many cases is very different. The laceration does not heal, the cervix gapes open, involution of the pelvic organs does not take place, pelvic congestion is kept up, and uterine catarrh and menorrhagia follow. The general health is more or less affected, depending upon the vigor of the particular constitution, and the duration of the local disease. In some cases extensive reflexes are developed; but the conservative man will ever bear in mind the possibility of overlooking neurasthenia and hysteria in this class of cases.

Local and general treatment will effect a cure in many of these cases without operation. Rest, tonics, regulation of the bowels, ergot, hot water, vaginal douches, the application of glycerine tampons, painting the cervix with Churchill's tincture of iodine, together with scarification of the cer-

vix, will frequently improve the condition so markedly as to effect, practically, a cure. But often this treatment proves ineffectual and operation is necessary. Another indication for trachelorrhaphy is the existence of laceration of the cervix as a complication of retroversion or retroflexion of the uterus. Not infrequently the malposition can not be corrected until the intra-vaginal cervix is restored by operation. It is important that endometritis, existing as a consequence or as a complication, should be cured before closing the laceration. Where this is difficult or impossible, and in all cases in which uterine hemorrhage is a feature, the trachelorrhaphy should be preceded by dilatation of the cervix and curetting of the uterus. Trachelorrhaphy done under these conditions has given very satisfactory results in my hands. When done for supposed reflex effects, due to cicatricial tissue, the outlook is not so promising.

It will be observed that the operation has been recommended only for uterine disease. When the uterine diseases exist in connection with inflammatory disease of the appendages, the operation is contraindicated. Under these circumstances, there is great danger of causing acute peritonitis; or, this failing, drainage from the uterus is interfered with and subsequent acute attacks of salpingitis promoted. In a neglect of this contraindication lie most of the dangers and disappointments of trachelorrhaphy.

The relation of laceration of the cervix to tubal disease is a subject worthy of careful study. That laceration of the cervix is a frequent cause of subinvolution of the uterus and endometritis is generally believed. That endometritis causes salpingitis by extension is also true. Hence, it appears probable that laceration of the cervix sustains an important relation to salpingitis as one of its predisposing causes. The relation between laceration of the cervix and cancer also is probably more than accidental. These considerations are further inducements to repair all lacerations of the cervix which are causing active symptoms.

I believe that trachelorrhaphy, done under the conditions laid down, is a perfectly safe and very valuable operation; and that the present tendency to decry its usefulness arises from a failure to observe its proper indications, or to carry out the principles laid down by its inventor for the operation itself. Of lateral and posterior incision of the cervix I shall say but little. I believe that the field of usefulness of

these operations is limited, but that in exceptional cases they may be valuable.

I hope I have made it clear that my own experience has made me a firm believer in the value of minor uterine surgery for uterine disease. It seems equally clear to me that the cause of disappointment in the past when it has been met has been a failure to properly study the cases; and thus uterine surgery has been employed for other than uterine disease. Also that the disasters of uterine surgery have been due to insufficient antisepsis; or to the fact that operation has been done in the presence of disease of the uterine appendages, more especially pyosalpinx and abscess of the ovary.

When it was believed that inflammation of the appendages was cellulitis, which was caused by, and kept up by, disease of the uterus, and only to be cured by curing the uterine malady, it was perfectly logical to attack the uterus with our therapeutic resources. But experience has shown the dangers as well as the futility of this method, and modern pathology has brushed away the apparently rational basis upon which it rested. It is upon this ground that I have opposed useless and dangerous uterine treatment in complicated cases of pelvic disease.—*Memphis Jour. of Med. Sciences.*

Treatment of Puerperal Convulsions.

BY D. T. SMITH, M. D.,

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It is a supreme moment when a physician is called upon to face an attack of eclampsia at the bedside of a lying-in woman. All eyes are turned to him. All hearts for a moment lean upon him as if he were a god.

Happily, then, if he knows how to deport himself, happier still if he knows how to lead his patient from danger to safety.

I once believed that I knew what should be done in a case of eclampsia and could then have written this article with confidence. To day, after having read all the principal authors and after fuller experience, I confess I do not know. And since eminent authors promiscuously contradict each other

as to the best methods of treatment, it is not too much to require that the whole subject be investigated anew, taking what is already on record as matter of suggestion.

Still, something we must do; what shall it be? First is, of course, the diagnosis. We are possibly prepared for that in some degree by the history of our case. Have our services been bespoken beforehand? We have informed ourselves whether there is epilepsy or tubercular meningitis or heart disease that might result in misleading convulsions.

These all we get by simply making close inquiries as to the general health. But more especially we have tested the urine, and if we found albumen, and particularly if we have had a history of headache, of a certain dizziness, or intoxication, bloating of the face and scant urine, we are rather expecting the attack and can at least escape surprise.

Now for our treatment: Shall we bleed? How much? Why and why not? Many good authorities now say bleed; some to four or six ounces, some to a pint. They say they get "good results," a cruelly indefinite term, a will-o'-the-wisp, that has led so many thousands through the swamps of uncertainty into the pit of destruction for their patient. Others say they get only ill results from it. But before taking sides in the dispute, we must know how much. Some say four ounces to a pint. There can not be much dispute here. To lose four ounces will not harm any person of full habit, and to lose sixteen ounces will not often kill, even in cases of weak heart. Then it might allow a greater portion of water to enter the veins, and thus both promote elimination by the kidneys and the skin. Besides, for awhile, till the water should take the place of the abstracted blood, the pressure on the brain will be less. So I do not think the physician's conscience should pain him after he loses a patient merely because he has taken away five to fifteen ounces of blood at the beginning of the attack.

CHLOROFORM.

Shall we give chloroform? Undoubtedly chloroform produces quiet sleep; so if the patient would stay quiet when once made so, or would wake up well when once put to sleep, it would be the very thing to give. But unfortunately this is far from being the case, so we must consider other things that may happen. Are we going to give chloroform continuously or only at the time of the spasms? If we give it continuously, we prevent the oxygenation of the blood; we promote the accumulation of carbonic acid and thus furnish

the disease a most faithful ally in its effort to bring about death. If we give it only during the convulsions, we have to wait till the tonic spasm, with which each paroxysm begins, breaks up into clonic spasms before it can reach the patient's lungs, and then before it reaches the brain the paroxysm is over. The amount of our gain may be, then, only that we have helped to accumulate a little more carbonic acid in her blood and nothing more. But if we can stave off a considerable number of paroxysms, we may prevent the accumulation of carbonic acid which takes place principally during the paroxysm.

What shall we say then for chloroform? Why, until the laity are better educated, the young physician will be excusable for having some chloroform about for appearances, and the larger the proportion appearances bear to use, perhaps the better. The statistics of chloroform are of little value for the reason that very few physicians have ever relied on chloroform alone in the treatment of eclampsia.

CHLORAL.

Chloral and chloral by enema, probably, has not an enemy. It does what is expected of chloroform and in known doses does it without material harm. In too large doses heart failure may be produced, and in cases of very weak heart it may produce death in otherwise safe doses.

What shall be the dose of chloral? I would say about sixty grains for the first enema given in starch water, then thirty grains every half hour until 180 or 200 grains are given to a patient of average strength, or until arrest of the paroxysms is brought about.

VERATRUM VIRIDE.

What of veratrum viride, that in the hands of some has cured nearly all the cases met? My answer to this is that I have never met with a statement of such cures as having occurred, in his own experience, from any physician whose standing in the ranks of medicine entitled him to any higher authority than the privilege of making a suggestion. I think its reported success depends either upon a lucky run of cases in some instances, or a fortunate facility of imagination.

PURGATIVES.

I once thought an eclampsia patient who could be purged in time, and purged thoroughly, with hydragogue cathartics ought not to die. But some later experience of my own greatly impaired my confidence in the certainty of results

from this treatment. Statistics, however, as far as I have met them, in regard to this point, are in a high degree unsatisfactory, but extremely unfavorable. Since the collectors of these statistics have not given us in separate tables the dosage of purgatives, the kind used, or the status of the patient with reference to delivery, we are left as far as any practical purpose is concerned to grope in the dark. Statistics, to be satisfactory, should show whether or not delivery had taken place, what drugs were used, in what doses, and how soon after their administration purging came on. But if reports of the success had in the use of morphine and chloral are confirmed, it is not likely that the history of the treatment of eclampsia by purging will be repeated merely for the purpose of supplying statistics.

If we have decided on purging, what shall we use? We desire to have quick action and we think we ought to have elimination. The purgative, then, should be the most rapid that is safe. Now, every one has observed that in all these cases there is a want of responsiveness in the *prima viæ* that prevents any safe dose, or even dangerous dose, from acting promptly. If purging is achieved in four hours we have done well; often it will take six hours, and I fancy there is a close relation between the time required for the action of the purgative and the severity of the disease.

Fortunate, then, if the patient has taken the always proper precaution of having emptied the rectum and colon with a gentle purgative before labor, or the convulsions, come on. Enemas then must be resorted to as quickly as possible, and this may lead to uncertainty in the use of chloral. For, while the bowels are filled with a clyster of warm soap-suds, the chloral will be absorbed slowly and it is difficult to form any notion of how much of it is being absorbed. However, the experienced physician can differentiate between the narcosis of uremia that is found between the convulsions and that of chloral, and be guided by its effects in its administration, at least until catharsis has been produced. Better still, however, is an injection of half an ounce of glycerine. But even this, so satisfactory in its action, ordinarily, will be somewhat disappointing in the paresis of the bowels, usually found in puerperal eclampsia.

The selection of a purgative is often a puzzle. My own has been modified compound jalap powder with croton oil. Croton oil has been given to four drops in sweet oil, or any

other convenient vehicle, to be followed at once by one of the following powders:

Pulv. Jalap,	. . . . .	3 ij
Potas. Bitart,	. . . . .	} aa, 3 j
Sodæ et Pot. trt.	
M. ft. cht. No. viij		

S. One powder every half hour till free purging. One-half of these is as much as it is safe to give. The rest, however, will likely be wasted in attempting to give them, or they will be vomited.

As soon as catharsis is established, morphia may be given, hitherto contraindicated by the use of the purgative. Of this, one-fourth to one-half grain may be given every half hour, or until two or three grains are given.

Here arises the question, How does purgative act to control eclampsia, if, indeed, it does control it? We like to say, by elimination, but this is by no means certain. The poison that is producing effects so dreadful has been perhaps two or three months in the blood, ready at any time to produce an explosion; but now that convulsions come on, the patient may die in six or eight hours. There is something, then, besides its mere presence that is killing the patient. So it may be that the first effects of purging is to allow freer and fuller visceral circulation, resulting in removing some pressure from the brain. It acts well in albuminuria of the pregnant where there are no convulsions, and in this case it likely does so by elimination.

Calomel is slow in its action, but as it is easy to administer and can not be brought up in vomiting, it is always well to give ten or twelve grains at the beginning. Elaterium is too violent and too uncertain to be relied upon with confidence.

It is a question, indeed, whether with a very feeble heart, even ounce doses of such salts as bitartrate of potash or Rochelle salts are altogether free from dangerous effects. The foregoing is a method of treatment I once thought almost infallible; but failure under the fairest opportunities caused me to think differently, and now comes Tittel with statistics to prove that 56 per cent. of all cases treated by the purgative method die, showing this to be the worst of all methods of treatment. At the same time Neil comes forward with a showing of a loss of only two cases out of sixty by the morphia treatment, giving as much as three

grains in from four to seven hours, while Titel, Testul and others report the mortality under the use of chloral alone as only four per cent. From 150 to 180 grains of chloral are mixed and beaten up with egg yelk and milk, and sixty grains given at once by enema, to be followed by thirty grains every hour till the whole amount is given. With a method of treatment so nearly perfect as this purports to be, not much remains to be sought for.

It is imperative, however, that entirely new collections of statistics be made, gathered with all the precautions against error that the advanced knowledge of the day renders possible.

SHALL PREMATURE LABOR BE INDUCED?

Let us glance at this matter in the light of statistics. In a total of 455 cases of eclampsia collected by Wiegner, 109 occurred before, 236 during, and 110 after the birth of the child. In ninety-nine cases given by Jacquemier, fifty-three cases occurred during pregnancy and forty-five cases after labor. In 133 cases reported by Depaul 106 attacks occurred before labor and seventy-seven cases after labor. That is, as far as we can gather from the figures, about twenty-five per cent. of attacks come on before labor and seventy-five per cent. during and after labor. The cases which come on after labor follow it in a short period, and one may for all practical purposes consider labor as the determining cause in at least seventy per cent. of cases. It is reasonable also to conclude that whatever brings on convulsions aggravates them when present. Therefore, at the very lowest, we may calculate on doing harm in at least seventy per cent. of cases by inducing premature labor, and that without a fair prospect of doing good in any. If labor is on, there appears nothing against it being expedited, but *accouchement force*, in the light of both reason and experience, seems to be absolutely without justification, and induced labor of any kind, except in a few obstinate cases of albuminuria.

Whatever may be thought of the treatment by purging after the outbreak of eclampsia, there are not two opinions in regard to this mode of treatment as a means of prophylaxis. The mild hydragogues, such as have been mentioned, eked out with bitartrate of potash at intervals, and aided by a milk diet, is well-nigh infallible.—*Med. Progress.*

Conservatism in Abdominal Surgery is that Which
Delays Not—"Be Sure You are Right,
and Then Go Ahead."

The subject of early interference in abdominal troubles is old enough to be threadbare, and familiar to every surgeon who tries to keep abreast with the times, and yet there are many good ones who do not yet appreciate the gravity that hangs on a few moments of time to patients suffering with serious abdominal conditions. My experience is not so extensive as that of many others in this branch of surgery, but it has been sufficient to convince me that conditions involving the life of a patient in this region are often masked, and thus cause uncertainty in the mind of the surgeon, and this uncertainty of diagnosis in turn causes delays. When at last the clouds have rolled away and he can clearly satisfy himself of the true pathological condition of his patient, his patient in turn dies. Take as an example, appendicitis. All the symptoms may ameliorate when patient and physician think all danger is past. All of a sudden and without warning, alarming symptoms may arise, collapse and death follow in quick succession. If called to a case with pain at Burton's point, elevated temperature, rigid muscles over the right iliac region, obstinate constipation remaining—after reasonable attempts at purgation—with or without a tumor being perceptible, I would unhesitatingly advise laparotomy. And while looking upon this operation as a very grave procedure, I should count it as nothing as compared to the risk of leaving the patient until symptoms arise which to the eyes of the surgeon should point to a speedy termination. When suppuration and peritonitis set in, operation should not be refused, but then it is only as a forlorn hope, and if the patient recover, it is the exception rather than the rule. If operation be performed, and it should be found not to have been actually necessary, so much the better for the patient—he will recover anyway—and if, on the other hand, it be found a necessity, he will be spared a miserable death. I would lay this down as a wise maxim, that if we wait until a clear diagnosis is reached, in diseases in or about the appendix, our patients are almost certain to die.

The same is true of intestinal obstructions, volvulus, etc. Some writers advise no operation until fæcal vomiting occurs. I think this unwise. I have seen, in my own experi-

ence, three patients die from troubles of this nature, who never vomited faecal matter at all. Obstruction of the bowel, pain, tenderness, tympanitis, and general peritonitis following, and, after great suffering, death came to their relief. No faecal matter was ever detected in the discharge from their stomachs. All of these cases, when first seen by me in consultation, were in condition to have borne laparotomy well. This, I urged, even before the present knowledge of asepsis and antisepsis. Strange to say, it was refused, not by the patients themselves, but by the attending physician. Each thought delay would bring relief to his patient—and it did—but it was like the silence that reigned in Warsaw. In trammatism of the internal viscera from any cause whatever, the same rule holds good. If the abdominal cavity has been pierced by ball or knife, it would be wise and conservative surgery to open the abdomen at once and discover the injuries inflicted and repair them, and thus give to the patient the safest, and, in many cases, the only means of a complete recovery. I would not think of leaving a patient with a bullet hole or knife wound in the abdominal cavity without recommending operations, any more than I would think of leaving a woman undelivered with the child's head appearing at the vulva—and all pain gone. I think the necessity for active interference in the one case just as strong as in the other. If none of the viscera be found injured, then a little incision in the abdominal wall two or three inches in length, made under strict aseptic rules, would interfere very little with speedy recovery. When, on the other hand, wounds on the viscera have been inflicted, what reasonable hope have we if the bowel, bladder, stomach, spleen, liver, pancreas or mesentery have been sufficiently injured to occasion hemorrhage, or the emptying of other fluids into the abdominal cavity? Death is almost sure to follow, and that right speedily, without prompt and wisely directed surgical interference. With strangulated hernia, intersusception and volvulus, the same rule holds good. In hernia, after a reasonable effort has been made to replace the strangulated bowel or omentum, no time should be lost in futile efforts oft repeated, but operation should be at once resorted to.

Continuous use of taxis, with the force and violence usually employed, I am satisfied often does much injury, and is seldom, if ever, attended with good result to the patient. Waiting for alarming symptoms to intervene in these cases

before using the knife simply hastens our patient to the cemetery. I saw a case recently where an operation was postponed, as the patient did not seem dangerously ill. The man suddenly began sinking rapidly, and the operation came too late to save him. A three-inch incision performed on the first or second day, in this case, would have saved his life.

In volvulus or intestinal obstruction the diagnosis is not always easily reached. When we have a patient with bowels locked up, localized pain and tenderness of the abdomen, and, in the majority of cases, vomiting, with that peculiar facial expression which, to the eye of the surgeon, is ominous of evil, and when cathartics and enemas, faithfully and intelligently administered, fail after a reasonable length of time to give relief, the pain, tenderness and tympanites increasing, then is the time to operate if we hope to save our patient.

In regard to the diseases of the tubes and ovaries, I can speak from well-founded experience. Where there are pus collections in tubes, ovaries or broad ligament, we have no option in the matter—operate. This is one point I believe upon which all surgeons agree. In other pathological troubles in these organs, after well-directed efforts have failed to give relief, and the patient is more or less an invalid, ever subject to recurring attacks of peritonitis, I deem it right and proper to offer that relief which the knife can only give. The surgeon who hesitates and waits for nature to come to his aid, will often see his patient by divine dispensation (the surgeon's ignorance, or neglect of duty) pass beyond his power to give relief. Whatever found in these organs that is harmful should be removed because it is harmful, and whatever is not harmful, if really pathological, should be removed lest it become so. Such conditions can be of no service to the patient, but are an evil continually, and, like the sword of Damocles, ever threatening the health or life of the patient. No ovaries or other organs should be removed except for truly pathological conditions, but when these do exist, if involving the life or health of the patient, they should be removed as soon as discovered, thus sparing the patient the risk of repeated attacks of peritonitis and complicating adhesions which involve more or less adjacent organs. In summing up, I would therefore urge two things:

1. If we hope for success in operations about the abdominal cavity, they must be performed upon living subjects, and

not upon the moribund. Operations upon such can give no relief, but throw discredit upon procedures which, if performed in time, would have been crowned with success. Of course, it is right to give a dying man a dying man's chance. This must be the exception in cases of emergency, and not the rule.

2. Not every man who is a surgeon, or gynecologist, should take it upon himself to open the abdomen—save in cases of emergency. The abdominal cavity is a field to be explored, not by sight, but by the sense of touch. Its contents are to be known in health and disease by that delicate sense which experience and teaching, by oft-repeated examinations, alone can give. The abdomen is easily opened, but no one can tell what he is going to find within its hidden cavity. I therefore would urge the general surgeon or practitioner who has not specially prepared himself by a special course of training for such work, when it is possible to obtain a specialist, when operations of this kind are necessary, to do so, both for his own and his patient's sake. The field is a large one, and the skill, tact and judgment of the best of us are often subjected to the greatest tension in coping with conditions that are suddenly thrust upon them. Here, decisions must be rendered in a moment, without argument, the result often being weal or woe to the patient.—GEO. R. DEAN, M. D., in *Dixie Doctor*.

Puerperal Fever.

BY S. G. DORR, M.D., BUFFALO.

Read before the Buffalo Medical and Surgical Association.

There will be no effort made in this paper to run through the etiology, morbid anatomy or mathematical percentage of the different subjects presented. Of all these things you have a well-founded, general knowledge.

There are but a few questions which I intend to present for your consideration this evening.

1. Is puerperal fever epidemic?
2. Does puerperal fever depend on a special germ which is pathognomonic?
3. Is it auto-genetic or self-infectious?
4. Does infection take place previous to labor?
5. Treatment.

1. *Is puerperal fever epidemic?*—The technical word epidemic, as applied to disease, has several different meanings attached to it, all of which include the notion of general prevalence among a people or community. Some physicians, as well as writers, make contagion the essence of epidemicity. Etymology does not justify such a conception of the term epidemic. The best writers use the word as signifying wide-spread causes, such as atmospheric, acting at the same moment of time on many individuals, or as something regarding which speculation is vain and is referred to as an epidemic influence. The promiscuous use of the word epidemic in medical literature and medical talk is to be deplored; to the mind of the medical student it produces hopeless confusion.

There is plenty of testimony showing a connection between puerperal fever and the zymotic diseases, such as scarlatina, diphtheria, erysipelas, etc., but curiously there is an entire absence of testimony showing puerperal fever to be any more abundant during the prevalence of these diseases than at other times. The season of the year having more influence than any other factor outside of hospital infection, twice as many cases occur in the six months from December to May as from June to November; and the smallest number of cases occurring during the year being in the months of September and October. This is not to be accounted for, however, by epidemic influence, but by the more constant contact of septic material during the winter months. The outside air during cold weather is far more pure, but the inside air, the clothing, the bed and the house are more impure.

That deleterious material may find other channels for entering the system than a wounded surface, is evident. French writers report instances of toxemic conditions developing in young midwives during puerperal fever epidemics. When reading such reports I can not feel safe in following the writer, for I feel he has mistaken frequently a cause for a result.

The point upon which I wish to dwell is that it is possible to trace epidemics of puerperal fever directly to the carrying of puerperal poisons from patient to patient through the media of attendants, instruments and surroundings.

In theory, if not in practice, the doctrine of contagiousness has ceased to be a subject of dispute, and the epidemic idea is little ventured by the well-informed.

The majority of all medical literature at this time declares this fever to be an infectious disease, due to some form of septic inoculation of the genital tract; an infection in point of fact which might be operative in the non-puerperal condition, and which is developed and increased in activity or virulence by the parturient. The hypothesis for this increased activity or virulence is the fact that in the capillary net-work of the blood-vessels of the uterus a great difference exists between the puerperal and the non-puerperal organ.

In the non-puerperal uterus the blood current moves much more rapidly through the capillary blood-vessels than it does through the distended capillaries of the puerperal uterus.

It has been frequently demonstrated that when the micrococci come in contact with the red blood corpuscles in a state of rest or of but little motion, they—the red blood corpuscles—will stick together, forming thrombi and micrococci, very rapidly increase in numbers, whereas, in a blood current, the opposite condition prevails, viz. : no thrombi, no increase of micrococci. I am of those who believe there is no such thing as puerperal fever as a distinct disease, standing independent and alone. I believe it to be really a surgical fever, modified by the particular septic germs in conjunction with the physiological conditions which belong to the puerperal state, such as blood changes induced by pregnancy; the deep situation of puerperal wounds; the presence of clots even in the capillary net-work of the uterus; disintegrating and decomposing tissue; the ease with which lymphatic absorption takes place, the size of the veins already referred to, and the proximity of the peritoneal cavity.

2. *Does it depend on a special germ which is pathognomonic?*—Up to the present time no distinct specific bacterial form has been demonstrated (that I am aware of) peculiar to puerperal fever only, the different, though closely allied bacterium of pyemia, septicemia, gangrene, erysipelas and diphtheria, all having a common connecting link in being generated in putrefying media, seem to have the power of producing puerperal fever. Curiously enough, the bacterium termo and bacterium commune, to which the putrefaction is largely due, are in themselves harmless, except it may be to produce putrid intoxication. We know clinically that we may have septicemia without pus, and know we may have abundant pus and no septicemia.

It has been demonstrated that the supposed harmless spores found on leaves, fruit, and even in supposed pure air,

can by a succession of cultures be brought to flourish in a warm alkaline fluid, and that they acquire a capacity to penetrate living tissues, to proliferate in them, to excite necrosis and to cause death.

Doderlein, Vad Ott and Winter, three eminent German bacteriologists, have, independently, examined the lochia of healthy lying-in-women to ascertain the presence of microbes. They all agree in their results, viz. : that the lochia contained in the uterus are free from germs, while the discharges in the vagina contain abundance of germs of many different kinds. They also examined the secretions of the genital canal in the unimpregnated state with corresponding result, viz.: the secretions from the tubes and uterus were free from microbes, those from the vagina contained germs in great numbers and variety. These results harmonize with our clinical experience. They explain why a retained fetus and secundines in utero do not putrefy, while the same products, if detained in vagina, quickly decompose.

All of you must have been surprised and gratified at times to see that a dead fetus entombed in the uterus for months made no trouble; that when it was expelled it was brown, dry and mummified.

3. *Is it self-infectious?*—Here comes the question of self-infection (a term which I prefer to auto-genetic). It is a practical point relative to treatment, and must settle the advisability of removing the contents of the uterus or not, and how is best to do it?

If there is no danger of self-infection, then it is best to let them alone. If there is danger of self-infection from the vagina, then vaginal antiseptics had best be applied.

The uterine cavity of lying-in women, where there were febrile symptoms, have been found to contain streptococci, and in women dying from septicemia, not only the uterus, but every organ of the body, contained them. Self-infection without a cause, I do not believe in, but a self-infection without contact of hands or instruments, I do believe may come from the vagina and other surroundings. I also believe that deleterious material may find other channels for entering the system than a wounded surface; but I am in doubt if there be cases of self-infection which result from processes within the patient herself, quite independent of the entry of germs, as is claimed by Dr. Barnes.

4. *Does infection take place previous to labor?*—The question of infection previous to labor is very obscure. It is im-

portant to know if it exists, and if such a condition does exist, then it is important to know what the noxious material may be and how it affects the patient.

I hope the members present, in their discussion, will be able to afford much light on the subject. It has been my fortune to have had several cases where a fever existed at the time or immediately subsequent to labor. I have no record of them only in memory. These cases have been frequently difficult, chronic and dangerous; more so, I think, than those where the infection occurred subsequent to labor.

It will be easily apprehended that it may arise in any period of pregnancy or of the puerperal state. It seems to me to be a metritis or a parametritis, more than a phlebitis in the beginning; although these cases may result in a subsequent phlegmasia albolens, they, in my experience, more frequently result, however, in abscesses or peritonitis. We not infrequently see the original inflammatory action of the womb and its immediate surroundings disappear, while the more remote parts of the body may be suffering acutely.

My experience has led me to believe that a septic infection does take place previous to labor and that it is a very different disease from that which occurs subsequent to labor. It is more chronic in all of its characteristics and more likely to form abscesses.

5. *Treatment.*—The present unanimity of treatment of this disease is curious. Most articles on the subject seem to wind up with curetting the uterus and bichloride irrigations. This monotony of treatment is broken, however, by differences of opinion relative to the percentage of the bichloride.

The young man must feel as though he had not discharged his duty to his patient, unless he has scraped the uterine cavity and irrigated the same with bichloride. I do not criticise the curetting of the uterus when it is necessary, but I do not think it is so very often necessary, and that frequently it is harmful rather than advantageous.

In regard to bichloride of mercury irrigations, I must say I have been unfortunate in not having seen any remarkable good results from their use. I do not criticise the cleansing of the uterus cavity, but I think we have a better agent in iodine.

Iodine may not be the most powerful germicide, but its wide range of curative powers, in removing inflammations,

healing sores and alterative action, makes it the better agent.

Bichloride of mercury is undoubtedly a good antiseptic for hands and instruments; they will be less colored by it than by iodine—then again, the hands and instruments differ widely from the diseased parts of the patient.

Pepper, in 1886, recommended the introduction of iodoform suppositories into the uterine cavity, which treatment I have tried with varying success. Sometimes the patient did better when the treatment was stopped; in fact, I have felt at times that the recovery of the patient was due to its suspension. That which has given me the most satisfaction for several years has been the simple vaginal wash of compound tincture of iodine, one drachm to the pint of warm water—irrigation repeated every six to eight hours. Upon this simple wash I have relied successfully in those very bad cases of the disease which frequently appear in that locality where my lot is cast.

Treatment is determined in great measure by the tissue system which is predominantly affected. There may be inflammation of the mucous membrane of the genitals only, or there may be inflammation of the uterine parenchyma, or inflammation of the peritoneum, covering the uterus and contiguous parts, or a phlebitis with pyemia or a septicemia, or an absorption of ptomaines with toxic effects—all these conditions are to be met with good judgment.

The fear of carrying the disease from patient to patient is great, but I now think quite unnecessary. When we feel that we are not common carriers in this respect, we are more brave. When we can show that the dirt, dust, filth, blood, heat, etc., will produce the disease, when taken in connection with the bacterium of every unwashed vagina, then you can not fear to point out the true cause of the trouble to the patient and friends. So far as preventive medicine is concerned, I am convinced that antiseptic vaginal irrigations are sufficient.—*Buff. Med. and Surg. Journal.*

HAVING had experience with Peacock's Bromides, I can say that for a quieter in spinal difficulties, accompanied with brain troubles, it has, in my experience, become indispensable. It affords sure results with less secondary trouble than any remedy that I have ever used.—F. A. KITCHEN, Toledo, O.

Gleanings.

A NEW MIXTURE FOR USE IN LOCAL ANÆSTHESIA.—Dr. A. Dobisch, of Zwittau, has used, for the purpose of producing local anæsthesia, a spray, with Dr. Richardson's ether spray apparatus, composed of ten parts of chloroform, fifteen parts of sulphuric ether and one part of menthol. After one minute's application of this spray complete anæsthesia of the skin and neighboring tissues was obtained, which lasted for from two to six minutes, and sufficed for the performance of such minor operations as opening abscesses of the cervical glands, incising a deeply-seated whitlow, and the excision of an epithelioma of the nose. In all the cases in which he employed the spray above mentioned the wounds healed satisfactorily.—*New Eng. Med. Monthly.*

CIRCUMCISION.—In the *Archives of Surgery* Mr. Jonathan Hutchinson sums up his experience in regard to the sanitary advantages of the rite of circumcision. After premising that it is not needful to go on a search for any recondite motive for the origin of the practice, he says: "No one who has seen the superior cleanliness of a Hebrew penis can have avoided a very strong impression in favor of the removal of the foreskin. If not removed it constitutes a harbor for filth, and is, in many persons, a constant source of irritation. It conduces to masturbation and adds to the difficulties of sexual continence. It increases the risk of syphilis in early life and of cancer in the aged. I have never seen cancer of the penis in a Jew, and chancres are rare."—*New Eng. Med. Monthly.*

THE TREATMENT OF A RED NOSE.—One-fifth of the cases, according to Unna, are due to acne rosacea, with vascular dilatation; it has often a direct connection with seborrhea of the scalp; this seborrhea should be treated by the ordinary methods. When acne rosacea is present, Unna administers fifty centigrammes of ichthyol internally, and prescribes at the same time aqueous lotions of the same substance. The following is also used:

Ry. Zinc ointment,	. . . . .	20 grms.
Powdered rice,	. . . . .	5 "
Sulphur,	. . . . .	2 "

Unna also advises punctures of the dilated venous trunk with Hebra's instrument, repeated two or three times a week. The use of ichthyol soap is also indicated. Warm water alone should be used.—*K. C. Med. Index.*

THE USE OF NUTRITIVES AND TONICS IN NERVOUS DISEASE.—In all cases of vital depression it is a matter of the first importance that the physical system be reinforced by nutritives and tonics. The *Massachusetts Medical Journal* quotes Dr. Wm. Stocker as saying: "I have for some time past been in the habit of using 'Colden's Liquid Beef Tonic' in my private practice, and have also tested its qualities in cases under my care at Mt. Hope Retreat. I have found it an admirable nutritive tonic and stimulant, and in a great variety of cases accompanied by serious vital depression; and in tedious convalescence from want of appetite, and inability to digest the more common articles of aliment, 'Colden's Liquid Beef Tonic' will be found the very best preparation used, and I, therefore, confidently recommend it to the medical profession."

POPULAR FAITH IN ALTERATIVES.—Since the nature of the action of this class of remedies is, to some extent, as yet undetermined and obscure, they are necessarily prescribed empirically. To this fact is perhaps due the promiscuous use by the public, not infrequently with the endorsement of physicians, of a host of nostrums of no real medicinal value. Many of these have had enormous sale—indicative not so much of their worth as of the general belief in the necessity for the use of what are popularly termed "blood purifiers." Spring is the season when these are most generally resorted to.

When we consider that there is no condition of disease at some stage of which tonic alteratives are not indicated, it will be appreciated that next to agents such as opium and quinine, the action of which is specific, no class of remedies are more frequently demanded.

Messrs. Parke, Davis & Co. supply, under the name of Syrup Trifolium Compound, an alterative formula containing red clover, stillingia, cascara amarga, burdock root, poke root, prickly ash bark, berberis aquifolium, all valuable vegetable alteratives, either with or without potassium iodide. This has been used by physicians with much success in all conditions requiring alterative treatment.

A SIMPLIFIED TEST FOR SUGAR.—Professor Nothnagel has communicated to a meeting of the Medical Association at Vienna, a paper received from Dr. Becker, of Cairo, on a simplified test for sugar, which depends upon the fact that the paper used for the manufacture of visiting-cards contains a large quantity of potash, to make it heavier and fuller.

When this paper is brushed over with a concentrated solution of sulphate of copper, and then dried, the salt is crystallized on the surface. If the urine containing sugar is then added by means of a bit of wood and allowed to dry by the action of the air, or by holding it over an Argand burner (without browning the sulphate of copper), the latter is liquefied by the water contained in the small crystals, and the alkaline paper immediately produces the sugar-browning reaction. The more sugar the urine contains, the darker the color produced. The author considers the test highly sensitive.—*Lancet*.

ADMINISTRATION OF CHLORALAMID.—Much depends upon the proper administration of the new hypnotic, chloralamid, to obtain the full effect and satisfactory and beneficial results. The dose is from fifteen to sixty grains, with an average dose of thirty grains. Chloralamid is soluble in about twenty parts of cold water, and in one and one-half parts of alcohol.

An additional caution is necessary: Never dissolve or dispense chloralamid in hot water or warm solutions, as the heated preparation decomposes.

The best modes of administration are:

1. In a tablespoonful of whisky or brandy.
2. In properly proportioned solutions with wine, spirits or spirituous compounds.
3. In a small cup of cold water or cold tea.
4. In powder form, in wafers or cachets washed down with cold water.—*New Eng. Med. Monthly*.

DEATH FROM AN OVERDOSE OF PARALDEHYDE.—The deceased, aged twenty, was admitted suffering from typhoid fever, and but slight hopes were entertained of her recovery. As she was suffering from violent delirium and sleeplessness, a hypnotic was prescribed, and the temporary nurse was instructed, both verbally and in writing, how to administer the medicine. The patient getting worse, the nurse overlooked the directions she had received, and instead of giving one teaspoonful, unfortunately administered the entire contents of the bottle, viz.: from six to seven teaspoonfuls. In about five minutes the patient fell into an unconscious state, and, despite medical assistance, remained in that state for four hours, when she died. The quantity of paraldehyde that was administered is not mentioned, but it may be supposed the deceased girl took from six to seven drachms.

The resident medical officer of the work-house, in giving evidence at the inquest, is reported to have said that weakness of the heart's action was accelerated by the overdose. This appears strange, as it is usually believed that paraldehyde, instead of weakening the heart, like chloral, strengthens it, and diminishes its frequency. It is for this reason that it is especially valuable in the insomnia of cardiac affections. The coroner's jury returned a verdict that death resulted from failure of the heart's action, accelerated by an overdose of medicine administered while in a weak condition from fever.—*Lancet*.

ECLAMPSIA, HOT WET PACK IN THE TREATMENT OF.—I look upon the hot wet pack as a most valuable agent in the treatment of puerperal eclampsia. Cases apparently hopeless under other methods of treatment oftentimes yield to the profuse diaphoresis following a hot wet pack. The pack is to be given by wringing out four blankets in hot water, surrounding each lower extremity, the trunk under the arms, and finally the trunk and arms, with the hot, moist blankets, first slipping under the patient a rubber sheet, and afterwards tucking a couple of dry blankets over the whole, the head being kept cool by cloths dipped in ice water. The sweating thus induced was profuse, and no doubt carried off the greater part of the poison in the blood. Chloral and bromide of potassium, which lessen muscular action and dull sensibility, can be but temporary makeshifts until the more important object of treatment is obtained.

CHORDITIS TUBEROSA.—Dr. Clarence C. Rice presents the following conclusions on this subject:

1. That the condition known as chorditis tuberosa is not one of the pathological changes to be classed among those of chronic catarrhal laryngitis, but is itself the primary lesion.
2. The presence of the nodule is the direct cause of the catarrhal changes in the larynx, which are developed later.
3. This condition is almost always found in singers and public speakers, and is caused by a faulty method of using the voice; a callus occasioned by attrition of one band against the other.
4. Chorditis tuberosa occurs more frequently in women than in men, and is more often seen on the left than the right side.

5. A nodular enlargement will, in time, produce a similar change in the second band at the point of contact.

6. These nodules should be removed as soon as possible. Singing should not be allowed until the bands are normal; and faulty methods of using the voice should be proscribed.

BELLADONNA SUSCEPTIBILITY.—A girl of thirteen years, in order to have her eyes tested at the Medico-Chirurgical Hospital, was given the usual prescription:

Ry. Atrophine sulph., gr. i.
 Aquæ dest., 3 iii.

M. et Sig.—One drop in each eye three times a day.

In so short a time as ten minutes after the first instillation, the mother relates that the child began to complain of a smothering sensation referred to the head; dryness of the throat, headache, rapidly followed by dizziness, numbness of the hands and feet, and such general weakness that the child was hardly able to walk to the office of Dr. Frank Fisher, chief of clinic, to whom the mother, in alarm, at once took the girl. Besides the numbness, the girl complained of a sensation in the hands as if they were much swollen; her face grew quite red and afterwards purple. The symptoms became gradually less and disappeared in about five hours.

The two drops instilled contained one-ninetieth of a grain; but, when we consider the amount that is usually thrown out by winking of the eyes, and but a small portion of that which really did remain is probably absorbed, the actual quantity taken into the system must have been very slight; and yet the idiosyncrasy was such that this minute amount was enough to cause, in a few minutes, marked constitutional symptoms.—ERNEST B. SANGREE, M. D., in *Times and Register*.

GOOD POINTS FOR STUDENTS AND DOCTORS.—Dr. W. H. Steele, in *Items of Interest*, says:

Our colleges will turn out an unusually large number of graduates in the spring, who undoubtedly expect to locate in some Canaan of promise and build up a practice. It shows push and pluck for a young man to strike out for himself, much more so than to buy out a practice or partnership. We all, who have tried it, know it requires many things besides a sheep-skin to successfully conduct a practice. I will give a few points, many of which I have learned from sad experience, so that others may profit by my errors and losses.

Don't neglect your business.

Don't misrepresent anything to get business.

Don't try to economize by using cheap material or poor instruments.

Don't make any promises, either financial or professional, that you can not fulfill.

Don't lock your office during office hours to go off on a frolic, or to attend to any side show, or for any other purpose that can be avoided.

Don't try to tear down a competitor's reputation on which to build your own; it makes a rotten foundation.

Don't forget that the poor have feeling, as well as the rich, and are just as deserving of respect and your best services.

Don't be cross to the little ones; some day they will be men and women, and they will remember you for good or for bad.

Don't fail to take several good journals, and to keep yourself posted on all new instruments and improvements.

Don't buy a bill of goods because they are cheap or you can get time on them. Do a cash business, and be a cash customer to every one. It will wonderfully enhance your reputation in the community.

Don't repeat some slanderous story that may have been told you by talkative patients while operating for them.

Don't let a "good enough job" go out of your office; do your very best every time for your patient. By this means you will improve your work, improve your patronage, and improve your bank account.

Don't fail to be prompt in collecting and paying your bills, if from any cause you feel obliged to give or receive credit. By so doing you will gain and keep the confidence of all.

Don't use tobacco in any form; it is certainly of no benefit to you, and, to say the least, will work you harm physically, morally and financially.

Don't use intoxicating liquors, for intemperance is the rock on which many a good practice has been stranded, and any indulgence leads to excess.

Don't forget there will come a time when your eyes will grow dim, and your hand lose its cunning. It is when you are young, healthy and prosperous that you should lay aside something to fall back on in sickness and old age, and when you will be glad to be able to reflect that you are

leaving a busy, bustling world better for the part you have played in it. A serene, satisfied old age, well provided for, must be delightful.

HYSTERICAL CONVULSIONS, TREATMENT OF.—Dr. Petres (*Bull. Med.*) refers to this subject in this manner, viz.: Leave the patient as much as possible to herself, avoiding physical restraint. Pressure over the epigastric or ovarian regions will often bring an attack to a prompt termination. Another effectual method is to apply gradual pressure over the eyeballs, maintaining it for several minutes. This usually throws the patient into the hypnotic condition, from which she may be left to recover spontaneously, or may be abruptly awakened in the usual way. When electrical appliances are available, an interrupted and reversed current, applied with one pole on the forehead and the other on the abdomen or thigh, will soon bring round the patient. Most patients of this kind have one or more of what are termed "spasmogenic zones," tender, excitable spots, and pressure on or irritation of which will determine an attack. The author recommends the application of ice-bags or ether spray to these zones. Lastly, the author speaks highly of the benefits to be derived from the use of colored spectacles. The effect of color seems to present some analogy with that of pressure on hysterical subjects. Some colors precipitate an attack, while others provoke an agreeable sensation. He quotes the case of a girl on whom spectacles with red glasses produced striking effects both in checking attacks and in preventing their recurrence.

[The author has overlooked a valuable procedure for breaking up an attack, viz.: firm, and, if necessary, hard pressure on the supra-orbital nerves as they emerge from the cranium. This is done by facing the subject's head from behind as she is reclining, face up, and steadying the head by grasping it with the hand and using both thumbs for making the pressure. The most hysterical or the most intoxicated subject may be rendered perfectly rational by this method.—ED.]—*Archives of Gynecology*.

TUBAL PREGNANCY.—Abel (*Contrib. f. Gyn.; Am. Jour. of the Med. Sci.*) maintains that in the beginning a decidual membrane is formed from the endometrium, and that Friedlander's cellular layer is not fully developed in this. The superficial layer of the uterine decidua is present in a degenerate form at the second month. The tube external to the foetus

usually is not changed. In the foetal sac the mucous membrane of the tube forms a decidua vera, which is best developed at the extremity of the ovum until the serotina has become completely atrophied. Beneath the serotina, epithelium from the mucous membrane of the tube is often found. The epithelium of the villi of the chorion is threefold—two layers over the foetal and one over the maternal vessels. The spaces between the villi are dilated maternal vessels whose walls are not broken through by the villi of the chorion.

GENITAL AFFECTIONS AND SKIN DISEASES, THE CONNECTION BETWEEN.—Frank (*Br. Med. Rec.*).—The author states that an unmarried seamstress, aged twenty-eight, suffered for three years from headache and a burning feeling which arose from an eruption of the skin in the form of a large bullæ on the back, face and extremities, the contents of which were clear. The eruption subsided after fourteen days, leaving pigmentation. Almost at the same time disturbances of menstruation occurred, oöphoritis and salpingitis following. Menstruation became more difficult, and each time there appeared a new eruption of urticarial exanthem, and the condition of the patient became more and more unendurable. Both tubes and ovaries were removed by laparotomy, and from that time the patient was free from pains in the abdomen, and has remained free from eruptions of the skin. The observations were continued during a period of two years.

ITCHING IN SCARLET FEVERS is not always agreeable, and it has never been supposed to be a favorable sign, but St. Phillippe (*Rev. Mens. des Mal. de l' Enf.*, February, 1890), according to A. F. C., in *Archiv. Ped.*, in a paper presents the following conclusions, viz.:

1. Scarlatina is often a disease which is accompanied by itching.

2. This variety usually has a favorable prognosis.

3. The itching is due to the fact that the eruption is not intense and the cutaneous lesion not very profound.

The best application for the relief of this itching, or almost any other for that matter, is the following:

R. Campho-Phenique, ʒ ss.

Albolene Unguent, ʒ jss.

M. Sig.—Apply night and morning.

Another advantage is that it is in the direction of personal disinfection.—*Medical Mirror.*

Microscopy.

GOLD SIZE.—The *Dental Cosmos* says that the works on microscopy give complicated and tedious methods for making gold size from linseed oil (*oleum lini*). It is entirely unnecessary to follow them, as the article can be purchased from varnish-dealers at fifty cents a pint. It is known as "gold-size varnish." It costs more than this to make it, by boiling linseed oil with litharge, or passing oxygen through the oil, as one ingenious writer suggests. Gold size can be used as a cement as it is, but it is preferable to add about one-fourth the bulk of benzol to thin it, so that it flows more smoothly from the brush.

ABSOLUTE ALCOHOL.—It is quite expensive to buy absolute alcohol for general use, says a writer in *Dental Cosmos*. I heat four ounces of sulphate of copper until it is thoroughly dried, and then add it to one pint of commercial alcohol, and shake the mixture thoroughly and let it stand for a few hours. The salt takes up the water and turns blue. Alcohol treated in this manner answers most purposes where absolute alcohol is wanted. The same salt can be dried and used over again for another quantity of alcohol.

DEVELOPMENT OF THE DENTINE.—The *Lancet*, of December 19th, says that at a meeting of the Scottish Microscopical Society, held in Edinburgh, Dr. W. G. A. Robertson read a paper on the growth of dentine and the relation of nerves to odontoblasts, being the results of a research carried out in the physiological laboratory of the University. He studied the development of dentine in the teeth of rabbits and kittens; in the former taking advantage of the aid given by feeding the animal for a time on food containing madder, which stains the dentine matrix produced while the madder is being taken just as it does the matrix of bone. He finds that elongation of the dentine results from proliferation of connective-tissue cells in a formative ring at the base of the tooth-follicle. The diameter of this ring enlarges while the tooth is growing in breadth as well as in length, but narrows while the fang is growing into the shape of an inverted cone. The thickening of the dentine results from new layers of matrix added from within under the influence of odontoblasts, and not from interstitial growth, which produces nothing more than a slight increase in matrix between

the dentinal tubules in the crown of the tooth. The manner in which the pulp-cavity comes to be occluded and the dentine deprived of sensibilities in the crowns of the incisor teeth of the rabbit was explained. The odontoblasts in the tooth of an ox are bipolar, one process being a dentinal fiber, and the other continuous with the nerves of the pulp. He thus regards the odontoblasts and dentinal fibers as becoming in course of development the terminal organs of the nerves of the tooth.

HOW TO CLEAN OLD SLIDES AND UTILIZE SPOILED MOUNTS.—Dr. H. M. Whelpley writes as follows in the *American Microscopical Journal*. For two years past I have permitted soiled slides and spoiled mounts to accumulate in a box set aside for that purpose. The process I have recently followed in reclaiming them has been successful. I first placed the unsightly rubbish in a dish of clean water, where it remained until all of the labels were readily removed; with an old knife I next scraped off the cells and all cement that could be easily removed in this manner. All slides where glycerine or other substance soluble in water had been used as a mounting medium were again washed, and then the entire pile spread out and dried. I separated those that were clean and placed the rest in alcohol for several days. This solvent cleaned another portion of the slides, so that all that they required to render them as good as new was a washing in water. The remaining dirty ones were treated to a bath of oil of turpentine, where they rested for a few days. From this they were washed with alcohol and then finished in water. The few refractory ones that held out during all this time were made as clean as ever with benzol.

Although considerable time elapsed before the last slide was cleaned, it required but a few minutes of actual labor in the entire process. The time consumed is in letting them stand in the different liquids. Nor is this process expensive, as the oil of turpentine did most of the work. Hereafter I shall divide my old slides into three classes and clean them separately, so that less alcohol will be required. The first box will contain slides that can be washed clean with water, the second lot will be those that alcohol will clean, and the third ones requiring benzol.

Cover-glasses are so cheap that I do not save them, unless they are cleaned with water. I find it very difficult to properly clean thin cover-glasses that have cement upon them.

Book Notices

PRINCIPLES OF SURGERY. By N. Senn, M.D., Ph.D. (Milwaukee, Wis.), Professor of Principles of Surgery and Surgical Pathology in the Rush Medical College, Chicago; Professor of Surgery in the Chicago Polyclinic; Attending Surgeon to the Milwaukee Hospital, etc. Illustrated with 109 wood engravings. 8 vo. Pp. 611. Philadelphia: F. A. Davis. Cloth. Price \$4.50.

Professor Senn is so well known as a surgeon of learning and extensive experience that it would be accepted in advance that a work by him on the principles of surgery would be one of great merit. No one holds a higher position as a surgeon than he does, and his writings on surgical subjects have long been quoted as authorities. He has a high standing as a microscopist. It is but a few months ago that we noticed in the MEDICAL NEWS an interesting work by him on bacteriology.

Prof. Senn truly says that the recent great discoveries relating to the etiology and pathology of surgical diseases have made the text-books of only a few years ago old almost worthless. Take, for instance, Miller's Principles of Surgery. It would be quite worthless, at the present time, to place in the hands of a student for him to learn from it the principles of surgery as now taught in medical colleges; but much more recent works fall little less short in setting forth surgical science of to-day. While not a few treatises that have been issued within a few years contain much *practical information*, yet the majority of them do not exhibit the *fundamental principles of the art and science of surgery*. They constitute excellent works from which to study the treatment of fractures and dislocations, ligation of arteries, lithotomy, etc., but their authors have not kept pace with the advances in surgical pathology and other departments involving surgical principles.

Prof. Senn, in the work before us, has endeavored, he says, at least in part, to fill this gap in surgical literature—preparing a book for the student and practitioner which should serve the purpose of a systematic treatise on the causation, pathology, diagnosis, prognosis and treatment of the injuries and affections which the surgeon is most frequently called upon to treat. We have no doubt that a careful examination of the work will convince every one

that he has so far succeeded in his object that no publication that has heretofore been issued so well represents the progress that has been made, up to the present time, in developing the principles of surgery, as the volume before us.

In the way of presenting an interesting fact in regard to erysipelas we quote from page 369: "The microbe of erysipelas was always found with the products of inflammation within the lymphatic vessels, and only exceptionally in the connective tissue spaces, which anatomically are only a part of the lymphatic system. The pus streptococcus penetrates the tissues more deeply; it is not only found in the lymphatic vessels and connective tissue spaces, *but it migrates beyond the lymphatic channels and infects different kinds of tissue, thus giving rise to a more deeply seated and more intense inflammation.* The streptococcus of erysipelas is found only exceptionally in the immediate vicinity of blood-vessels; *while the microbe of pus can always be found arranged in radiate lines around vessels entering the adventitia, the muscular coat, and often even in the lumen of the vessel.*"

As regards the *bacillus of tetanus* we quote as follows from page 389: "Kitasato experimented with a pure culture of the bacillus of tetanus on mice, rats, guinea pigs and rabbits, and never failed in producing the disease, provided a sufficiently large dose of the culture was administered. In mice the disease appeared, without exception, twenty-four hours after the inoculation, and proved fatal in two or three days."

We have selected these quotations at random. We could fill our journal with many others, showing how thoroughly the author has studied the pathology, etiology and causation of surgical affections.

THE YEAR-BOOK OF TREATMENT FOR 1891. A Critical Review for Practitioners of Medicine and Surgery. Contributors: Barclay J. Baron, M.B.; Malcolm Morris, F.R.C.S.E.; Stanley Boyd, B.S., F.R.C.S.; Edmund Owen, M.B., F.R.C.S.; J. Mitchell Bruce, M.D.; Sidney Phillips, M.D.; Alfred Cooper, F.R.C.S.; Henry Power, M.B., F.R.C.S.; George P. Field, M.R.C.S.; Chas. Henry Ralfe, M.D.; Archibald E. Garrod, M.D.; James Ross, M.D.; E. S. Reynolds, M.D., etc. 12mo. Pp. 480. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: Robert Clarke & Co. Price \$1.50.

The whole number of contributors to the volume for 1891 is twenty. From the incomplete list that we have copied from the title-page it will be seen that they are gentlemen of high standing as physicians, surgeons and scientists.

This year the "Year-Book" has been increased considerably in size, but the original plan of the book has not been altered. We may repeat, as stated in notices of previous issues of yearly volumes, that the object of the "Year-Book" is to supply a concise epitome of the chief articles of the year, with a short criticism of the more important subjects, together with full references. It is not a dictionary or a text-book of medicine.

The "Year-Book" is on the plan, in some respects, of Braithwaite's Retrospect, which is issued twice yearly. It differs, however, in some essential respects. In the latter the articles of contributors to medical journals, containing important information or developing new facts in medicine, are quoted as written. Some of the communications are considerably abridged by lopping off unnecessary paragraphs, but whatever is published is in the language of the writer and overloaded with his verbiage. In the "Year-Book," on the contrary, the facts set forth by a writer are given in the collaborator's language. The pith, therefore, of an article in a medical journal containing information of some new discovery by the writer or the results of diligent investigation are here stated in as few words as possible, but fully enough for a clear understanding—the collaborator employing his own language and methods of expression.

The following are a few of the subjects in regard to which the latest information has been gathered from the medical journals and other publications the world over during the year 1890: Diseases of the Heart and Circulation; Diseases of the Lungs and Organs of Respiration; Diseases of the Nervous System; Diseases of the Kidneys; Infectious Fevers; General Surgery; Orthopedic Surgery; Surgical Diseases of Children; Diseases of the Genito-urinary System; Venereal Diseases; Diseases of Women; Diseases of the Skin; Diseases of the Eye; Diseases of the Ear; Diseases of the Throat and Nose; Summary of the Therapeutics of the Year 1889-90.

Under the head of "Infectious Fevers" it is stated that, while in the treatment of these affections we should possibly abstain from the use of remedies which limit heat productions, we should not omit the use of reagents which abstract

heat already formed. Excessive heat, after it has been formed, exerts an injurious action on the tissues, and, if sufficient in amount, may produce a fatal effect. The treatment by the cold bath is trying to the patient and to the attendants. In most cases its good effects are equally obtainable, and with much greater facility, by tepid sponging, which is probably, of all antipyretic agents, the best where the fever is only moderately high. Where there is hyperpyrexia the cold bath acts more quickly, and is therefore indicated. Of drugs, quinine has the advantage of tonic action not possessed by acetanilid and antipyrine, but it is slower in action. Acetanilid may be given provided that no cyanosis, no great feebleness of the pulse, no malignancy in type of fever, exists. The dose to begin with should not exceed three grains. Salpyrine, a combination of salicylic acid and antipyrine, is favorably mentioned in the treatment of infectious fevers.

In order to keep abreast of the times in the treatment of diseases, we think every physician should have a copy of the Year-Book in his library. The price is very low—no greater than works of the same size intended for popular reading.

HEREDITY, HEALTH AND PERSONAL BEAUTY. By John V. Shoemaker, A. M., M. D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital, etc. "The law of the wise is the fountain of life."—*Proverbs*. 8vo. Pp. 422. Philadelphia: F. A. Davis. Cloth. Price, \$2.50.

This work, we understand, is designed not only for members of the medical profession, but for intelligent non professional persons. The author *apologizes* for its preparation by the remark "that there is among educated persons a generally confessed need of popular instruction as to matters of health, and of all things indirectly appertaining thereto; and this, in effect, is the concession of the existence of a considerable public need. There can be no dissent from the conclusion that the want arising from this need can be increased by perceptions aroused by such treatment of the subject of well-being as we have here endeavored to employ; that, in a word, supply will increase the public demand for instruction in this branch of knowlege. If, therefore, this

work prove satisfactorily to have accomplished the purpose in view, it will be gratifying, not otherwise, to find it secure of a lease of life."

Chapter I. treats of the "General Laws of Health." There are discussed in this chapter such subjects as, "Health and physical beauty dependent on observance of the laws of life;" "The ultimate cause of the integrity of all organisms the health of cells;" "The spendthrift tendency of mankind as to health;" "The moderate deployment of all the faculties, with intervals of rest, the secret of enjoyable life," etc.

Another chapter treats of "Nature's Evidence of the Law of Life and Growth." Other chapters consider—there are thirty-seven chapters in all—"Man's Spiritual Place in Nature;" "Man's Physical Place in Nature;" "The Sentiment of the Beautiful;" "The Source of Beauty of the Fair Sex;" "The Skin as an Organ of the Body;" "The Cleansing of the Face;" "The Action of Cosmetics on the Skin;" "Cosmetic Care and Treatment of the Face;" "The Nose in its Physical, Moral and Intellectual Aspects;" "Ventilation;" "Clothing," etc.

The subjects of not a few of the chapters are quite unique, the titles often exciting an interest as regards their contents. But the work is not one exclusively of theories and speculations by any means, but contains a large amount of practical, valuable information. Even recipes are given for making cologne and many perfumes. Here, for instance, is a formula for making "Farina Cologne": Oil of neroli, 1 drachm; oil of lemon, 4 drs.; oil of lavender, $\frac{1}{2}$ dr.; deodorized spirit, 14 oz.; rose-water sufficient to bring the mixture up to one pint. Macerate in a wooden vessel for the space of three months.

DISEASES OF THE DIGESTIVE ORGANS IN INFANCY AND CHILDHOOD, WITH CHAPTERS ON THE INVESTIGATION OF DISEASES, THE DIET AND GENERAL MANAGEMENT OF CHILDREN, AND MASSAGE IN PEDIATRICS. By Louis Starr, M.D., late Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania; Physician to the Children's Hospital, Philadelphia, etc., etc. Second Edition. Illustrated. 12mo. Pp. 396. Cloth. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price, \$2.25.

The first edition of this work was prepared in 1886. During 1890 the second edition was gotten ready by the author,

in which he has brought the subject matter thoroughly abreast with the present time. In doing this he found it advisable to make some re-arrangement of the original text. The chief additions consist of a section on alterations in the odor of the breath in disease; a section on urine alterations; a chapter on massage in pediatrics; and a detailed account of second dentition and its influence on the health in late childhood.

As stated by the author, it has been his object in this work to give prominence to a class of disorders constituting a large proportion of the ailments of childhood, but often too briefly considered in works on pediatrics. For the successful treatment of the diseases of the digestive organs in infancy and childhood, attention to the general regimen is quite as important as the administration of drugs, and it is upon the former that the student and young practitioner are usually the least thoroughly instructed. So much may be done by the selection of suitable food, by artificial digestion, by regulating the clothing, bathing, and other elements of hygiene, that the author, without neglecting therapeutics, has given greater prominence to these points.

Young physicians beginning the practice of medicine, who have not had the opportunity for obtaining experience in the treatment of the diseases of children, will find much in the work of Dr. Starr that will be of value to them in making a proper commencement when they meet with those affections.

THE PHYSICIANS' LEISURE LIBRARY, NO. 6. THE INTESTINAL DISEASES OF INFANCY AND CHILDHOOD, PHYSIOLOGY, HYGIENE, PATHOLOGY, AND THERAPEUTICS. By A. Jacobi, M.D., Ex-President of the New York Academy of Medicine; Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, New York, etc. Two volumes. 12mo. Pp. 266. Paper. Detroit: Geo. S. Davis. Price, 50 cents.

Prof. Jacobi is a distinguished specialist in the diseases of infancy and childhood. He has written a great deal upon the affections to which he devotes himself, and his writings always meet with marked attention. In fact, no one in this country is held in higher esteem as an authority in pediatry. The fact that he is the author of the work before us in two small volumes is sufficient to commend them to the profession in the United States.

Editorial.

RISKS OF COCAINE INJECTIONS.—Mr. Hallopeau reported to the Academie de Medecine that a single injection of cocaine, even in a small dose, may not only produce immediate toxic symptoms of a grave character, but may give rise to symptoms persisting for several months. These distant symptoms, he says, are analogous to those perceived sometimes immediately after injection, viz. : Obstinate headache, insomnia, numbness of the extremities, attacks of faintness, dizziness, prostration, loquacity and a state of great agitation. These accidents, it is stated, are chiefly observed in very excitable subjects.

M. Reclus, who uses cocaine largely, endeavors to controvert these statements of Hallopeau, and asserts that, properly managed, this valuable drug is innocuous. The following are his rules in using cocaine :

“ 1. The quantity of cocaine injected should never exceed 12 centigrams ; 2, 4, 6, or exceptionally 8 centigrams, sufficing for most minor operations.

“ 2. Employ a *weak solution* (two per cent.).

“ 3. Avoid the introduction of the drug into the interior of a blood-vessel. The best way to avoid the evil consequences of such a *contretemps* is to push the needle slowly into the tissue, and while so doing to press on the piston-rod at the same rate. In this manner, even if the vessel be pierced, only a small proportion of the solution can mingle with the blood contained in the wounded vessel.”

The *Medical Press* mentions two warning cases in regard to the dangers in the use of cocaine reported from France. In one the patient died, and the dentist who gave the injection was acquitted of neglect, but condemned for practicing medicine without qualification, the judgment indorsing the view that cocaine is an anesthetic which requires to be used with prudence, and can not legally be administered by other than a qualified medical man. In the other case, which occurred in Paris, the patient was with great difficulty brought around by hypodermic injections of ether. The cocaine injection was also made in this case by a dentist.

The *Journal für Zahnheilkunde*, September 25, 1890, reports a case of death in a dentist's chair from injections of cocaine into the gum, says the *Medical and Surgical Reporter*, given for the purpose of inducing anesthesia for the

extraction of roots of teeth. The patient was a woman twenty-nine years old, apparently perfectly healthy but very nervous. The extraction was painless, and nothing abnormal was noted. The operator withdrew from the patient's chair to get some water for the patient to rinse her mouth with, and on his return found her motionless. Physicians were summoned and artificial respiration was practiced without success. The autopsy disclosed the fact that three injections had been given, which served for the extraction of three roots. The quantity of cocaine in each injection was two centigrams, or one-third of a grain. The *Journal*, after commenting upon the danger of cocaine, refers to nine cases of fatal poisoning reported by Dufournier, in the *Archives Generales de Medecine*. One of these cases, however, is doubtful, as the patient took a mixture of chloral and cocaine. None of them happened to dentists, and the *Journal* thinks the case it reports the only fatal one occurring in the practice of a dentist. This may be true, but serious and well nigh fatal cases undoubtedly have occurred. The *British Medical Journal*, February 9, 1889, refers to one in which one grain and a third of cocaine was used.

To show the uncertain action of cocaine, a case may be mentioned in which one-seventh of a grain injected into the eyelid produced very serious poisoning. The case is reported in the *British Medical Journal*, in the article already referred to. It would appear not to be safe to inject a larger quantity than one-half or three-fourths of a grain, especially into very vascular tissues, from which absorption is likely to be rapid, and the consequent danger of a maximum effect upon the heart is greatest.

THE OBJECTS OF THE AMERICAN ACADEMY OF MEDICINE.
—The Chicago *Evening Journal* says that no man knows at what hour he may fall into a physician's care, and it is important, therefore, to every man that his life or health should not be tampered with by an ignorant pretender or a specious fraud. It is a singular fact, however, that countless people, who would employ only a skilled blacksmith to shoe a horse, will not seek skilled assistance when they or their families or friends are attacked by disease. It is a curious fact, therefore, that an organized movement to elevate the standard of fitness in the medical profession must be attended by a movement to educate the people into wanting physicians who can stand the test of a higher standard of fitness.

The American Academy of Medicine is an organization of physicians in various parts of the United States, the object of which is to improve the medical practice of the country by establishing higher standards of education preparatory to medical study as the means of preparing a higher professional standard for medical men. The President of the Academy, in his address delivered at its annual meeting recently held in Philadelphia, outlined its purposes as follows:

"1. Fostering of preliminary education, as being now, even more than before, indispensable for students of medicine.

"2. Advocating higher medical education and upholding medical colleges which afford the greatest facilities for proper medical education, and which demand a high standard of qualification of their students; and

"3. Advocating State control of the license to practice medicine, regardless of the possession of diplomas issued by medical colleges—making colleges what they should be, simply teaching bodies, thus stimulating to rivalry for the best teaching rather than for the largest classes, and affording the public better opportunity of judging of the qualifications of physicians than the present system of granting diplomas gives."

The *Evening Journal*, in commenting upon these objects of the Academy, as set forth by its President, says that it does not need an argument to prove that a young man with a natural aptitude for medical science, and with a mind thoroughly trained by preparatory study—disciplined in habits of application and severe thought—taught to investigate, to reason, to compare, and to reach logical conclusions on subjects of general knowledge, will acquire a theoretical and practical knowledge of medical science more speedily and more thoroughly than a man without preparatory mental training and with little natural adaptation for the work which he may have undertaken to perform. It is evident that if a proper foundation for medical study is laid, the student will acquire a better and more solid knowledge of the science to which he has devoted his thoughts.

Take two young men of the same age, and of equal natural mental capacity. Send both of them to the common schools until they are about fourteen years of age, and then separate them—one entering the preparatory department of a collegiate institution and continuing his studies until, at

the age of twenty, he graduates with the degree of A.B. The other, beginning work on a farm, continues at agricultural labors until he is twenty years of age. Both being twenty years old, conclude to study medicine, and place themselves under the instructions of a physician. Do they both learn with the same facility, grasping with the same readiness the facts as set forth in the medical text-books—scientific and empirical? By no means. The one who has had his mind trained to study, who has been accustomed to reason and solve the problems of science, and whose intellectual faculties have been cultured and refined in acquiring a knowledge of classical literature takes in at once the instruction presented to him. He has a disciplined mind, faculties trained for understanding and learning. He is accustomed to classifying, comparing and making deductions, and the facts which follow are understood at once. His progress is rapid.

What success follows the efforts of the young man who has left his work on the farm to acquire a knowledge of medical lore? Unaccustomed to scientific study, he proceeds slowly in classifying, comparing and making deductions. In fact, oftentimes he does not appreciate clearly the conclusions that are drawn, and frequently is compelled to accept as true a deduction without understanding it. With the study of anatomy and some of the other branches of medicine, that a knowledge of depends largely on the memory, he learns with more readiness. But his progress in qualifying himself to practice the healing art will necessarily be laborious and slow. Many such persons, we know, finally make good physicians, but they attain the goal only by great and persevering labor, and, no doubt, would have made better if they had had the advantages, before beginning the study of medicine, of a scientific and classical education.

There is no one who will not assent to the statement of the *Evening Journal* that the better physicians are and the more there are of superior merit, the more completely will unworthy claimants to the name of physicians be weeded out of its ranks through inability to compete with those more skilled, and, therefore, more successful in their practice. Public opinion should be attracted to the evil done by empirics, and wise legislation should aid the efforts of those engaged in the work for the protection of the people. The medical profession needs no such protection and solicits

none for its own sake. The members of it feel that they are competent to meet the wants of the community.

"A particular object of the American Academy of Medicine," as the *Journal* states, "is to direct public attention to this subject; to appeal to the voting population to procure for their own safety the enactment of laws in the several States providing for Boards of Examination, without whose license it will be illegal to practice medicine in the State. A new departure of this society proposes that such a Board shall disregard all diplomas from medical colleges and shall require on the part of any applicant for a license a state of proficiency to be measured by an established standard of professional knowledge. To effect this object, 'missionary work,' as it is well styled, is being done for the purpose of attracting the attention of the public to the need of procuring this State legislation in different sections of the Union for the protection of the citizens of those States. The membership of the Academy is largely made up of leading physicians in nearly all the States and Territories. Its objects deserve popular support and abundant success, for the work aims to preserve the public health, thus avoiding the suffering attendant upon illness, and the pecuniary loss consequent. To avoid these is humane, and aids in conserving the material interests of the State, thus contributing by preservation, to its prosperity."

COMMENCEMENT OF THE CINCINNATI COLLEGE OF MEDICINE AND SURGERY.—The institution held its fifty-sixth Commencement on the evening of March 7th, at the Scottish Rite Cathedral. Twenty-four gentlemen had conferred upon them the degree of M.D., as follows: A. Agee, Ky.; H. M. Bailey, Neb.; G. F. Braun, O.; C. E. Crommelin, Australia; W. E. Damon, Tex.; J. Heidelman, Ind.; J. L. Hendricks, Kan.; J. E. Hunter, Ky.; C. W. Isaminger, O.; H. S. Kimmel, O.; J. C. Kunz, Tenn.; A. F. Malloy, Pa.; W. T. McLean, O.; N. McMurray, Australia; D. C. Newell, Ill.; W. Roush, O.; F. C. Rust, Ind.; L. M. Schiel, O.; M. L. Smith, O.; W. G. Smith, Ind.; O. Scheibenzuber, O.; C. E. Shumard, O.; S. B. Wood, Tenn.; W. S. Yazell, Ky.

A very large audience attended the exercises. Gold medals for proficiency were bestowed on three of the graduates as follows: John C. Kunz, Louis M. Schiel, Wm. Roush.

The Faculty address was delivered by Prof. G. S. Mitchell. It was a sound, practical and interesting address, abounding in profitable allusions to the science of the profession.

The class oration was delivered by Dr. Louis M. Schiel. It was an admirable oration.

Prof. R. C. Stockton Reed, Dean, presented the report for the year. He stated that 4,000 gentlemen had matriculated in the school since its origin. Nearly 2,000 of these held its diploma.

We present a brief outline of Prof. Reed's remarks. We regret we can not give them in full, but the MEDICAL NEWS being nearly up in type, we have not the space. For the same reason we are prevented from adding some remarks of our own in the way of comment. He spoke as follows:

Our students have been required *pro forma* to attend two hours each day of the session at the Cincinnati Hospital, where they sometimes receive clinical instruction, usually at long range, and always, we believe, when there was material in the Hospital. This leads me to remark that we believe the proper way to teach practical medicine is at the bedside of the sick, and that the hindrance to medical education in Cincinnati heretofore has been the failure to obtain adequate clinical instruction. It has been the custom to bring patients into a large amphitheater, and talk about them in the presence of three hundred or more students. Delicate operations upon the eye, demonstrations in abdominal surgery, the sounds of the lungs and heart, are presumed to be taught in this way to a throng of anxious students but a few of whom are blessed with either opera-glasses or ear-trumpets. The farce thus daily enacted is a reproach to medical education. It were better to have but a few students present, that they might each grasp the lesson to be learned from the patient. It may be stated as a truism that the value of bedside teaching is in inverse ratio to the size of the class. The evil, however, is being corrected by the multiplication of hospitals, while at the same time the interests of humanity are being better conserved. The division of work into specialties has so far advanced in the profession that the demand has grown up for hospitals devoted to particular classes of patients. This demand is shown by the fact that the special hospitals of this city are filled with cases and are embarrassed with applications far in excess of their capacity, while the general hospitals are compelled to throw out their drag-nets for patients with which to carry on their daily spectacular performances. The reason for this is to be found, first, in the better results obtained at these institutions, and in the next place, because within their walls and under their humane management it is impossible for incidents such as the following to occur, to wit: A staff physician, with a group of medical students, was standing around the bed of a man supposed to be dying, indulging in the entirely useless performance of guessing the number of hours the unfortunate stricken one had to live. No doubt the man's indignation at this heartless performance had something to do with his recovery, so that, contrary to all the scientific guesses indulged in, he was able, after five years, to send them his greetings from between the plow-handles in far-away Kansas. But while it would be impossible for such an event to occur in the new hospitals with which our city is now blessed, it is of daily occurrence that a few advanced students are invited to attend operations, and to witness them under circumstances that will be of value to

them, while the ordinary sensibilities of humanity are not outraged. Under this new order of things our students are taught to be not only good physicians and surgeons, but with these relations they are taught to be gentlemen.

FOUNTAIN PEN.—There is no class of individuals to whom a fountain pen is more valuable than to physicians. Besides having to do much other writing away from his office, a physician has many prescriptions to write every day at the bedsides of patients; and we have always believed that they should be written with pen and ink. It is customary, however, to write them with a pencil for reasons so evident that it is not necessary to mention them.

A good fountain pen is as convenient to carry and write with as a pencil. This we know, for we have used one ourselves for five or six years, and have experienced much satisfaction in its use. Until within the time mentioned it was difficult to obtain a good fountain pen—one that would *always* write if supplied with ink, always in order, never requiring any shaking to compel the ink to flow, etc. There continue to be advertised, however, a good many fountain pens that are worthless. We never place any confidence in one that has a steel pen attached to it; for they work well with no other than a gold pen.

That our subscribers may be sure of making a good selection if, at any time, they wish to procure a satisfactory fountain pen, we will state that the pen made by Paul E. Wirt, of Bloomsburg, Pa., has no superior. There are many thousands of them in use, and they never fail to please. Write to the manufacturer for particulars and prices. While they have but one quality in the fountain pens they make, they have different sizes and prices.

A FINE MICROSCOPIC OBJECTIVE FOR SALE.—We have had left with us for sale a fine microscopic objective, dry, one-fifth inch in magnifying power, angle of aperture not less than 130 degs.; made by Gundlach—one of his very best makes. It has never been used. It is guaranteed to resolve the lines on any diatom that the one-fifth of Beck's highest grade objectives will resolve. Besides, in its resolving power, it is fully equal to Beck's fifth in all other qualities. While the price of Beck's glass is, we believe, forty dollars, this one will be sold for fifteen dollars. Address MEDICAL NEWS.

ADDRESS OF PROF. J. T. WHITTAKER.—Prof. Whittaker, at the recent Commencement of the Medical College of Ohio, delivered an address on the part of the Faculty which was listened to with great interest by the large audience in attendance. An imperfect outline of it was published in the newspapers, but a manuscript copy of it having been kindly furnished us, it will appear in the next issue of the MEDICAL NEWS. We received it too late to appear in the present number.

NEW ADDITIONS TO REMEDIAL AGENTS.—Among some new and convenient medicaments Parke, Davis & Co. announce are Mosquera's Beef Peptone, Malt Extract with Peptone and Urethral Bougies of Aristol. Mosquera's Beef Peptone is entirely free from the bitterness of the Pepsin Peptones, possessing an agreeable, sweet taste. Nutrition plays so important a part in modern therapeutics that any additions to eligible methods of nutrition are welcome. Malt Extract with Peptone makes an easily assimilable, highly nutritious combination of malt. Aristol is regarded by many as quite as efficient as Iodoform in its antiseptic action, and it possesses the special advantage of being entirely free from odor. The Aristol Bougies should find a wide application in the antiseptic treatment of the Urethra. Aristol is a substitute product of thymol, obtained by mixing a solution of iodine in iodide of potassium with an alkaline thymol solution.

DURING an epidemic of Dengue or Breakbone Fever, I gave Liq. Tong. Sal. a thorough trial, and found it much more successful than the usual treatment, such as iodide of potassium, wine of colchicum, quinine, salicylic acid, etc.; in fact, I found that Liq. Tong. Sal. effected a cure in nearly every instance.—A. M. SITTLE, M. D., Bowmanstown, Carbon Co., Pa.

DID you ever have \$1,000 in your pocket at one time? We offer this amount for an original advertising novelty to the man or woman, boy or girl, who shall devise the best originality to advertise Ridge's Food for Infants and Invalids in every home in America. For further instructions address Advertising Department, Woolrich & Co., Palmer, Mass. Mention the name of this paper when you write.

SAMPLES of Sander & Sons' Eucalypti Extract (Eucalyptol), gratis, through Dr. Sander, Dillon, Iowa. Eucalyptol stands foremost as a disinfectant, is a perfect check to inflammatory action, and invaluable in zymotic diseases. Meyer Bros. Drug Co., St. Louis, Mo., Sole Agents.

THE CINCINNATI MEDICAL NEWS.

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Original Contributions.

Valedictory Address.

BY JAMES T. WHITTAKER, M.D.

Delivered to the Students of the Graduating Class of the Seventy-First Annual Session of the Medical College of Ohio.

The last hour has come. You are now full-armed and equipped. Some one of us must step to the front to bid you good-bye. Once in ten years the duty devolves upon each member of the Faculty to speak to you the last word. This time this duty falls to me.

Believe me, my friends, my fellows, this night the occasion is an event in our lives almost as serious and impressive as in yours. The constant occupation of the day makes us unconscious of the lapse of time. Youth stalks into manhood, manhood creeps into age, as insidiously and as inevitably as the changes of the seasons themselves. These occasions force us to look at the clock, when we see, almost with a shock, that the hand has moved up an hour on the dial-plate of time.

We look upon life from very different standpoints at thirty, forty, fifty, sixty years of age, all periods represented by my colleagues in our work. Threescore and ten and more have been vouchsafed to our venerable and venerated President of the Board of Trustees, and we have listened with reverence to his words of wisdom, as to that mystical lore which belongs only to the sunset of a life ripe with every virtue and rounded with every grace.

How shall I, from my standpoint, use this opportunity to your best advantage to-night?

I might tell all our friends here assembled what fine opportunities you have had and what diligent use you have made of them, but our honored Dean has already said it

and further mention of it would not help you in your distant fields of work.

I might make an appeal for our medical college that we might, with proper facilities, compete with our foreign brethren in original work. But the time has not come in the State of Ohio. The people are as yet deaf to all such entreaty, and rich men resent suggestions of benefactions.

It is the law in protection of the people which should regulate medical teaching. As it stands to-day there is practically no law, and colleges multiply to represent and disseminate as they do in our city every freak, fraud and frenzy of which the human mind is capable, to the disgrace of science, perpetuation of error and infinite detriment to humanity. Fortunate it is for the people, little as they may appreciate it, that there are a few institutions which stand out now, as they have always stood, in the white light of purity and truth.

Then there are the hospitals, which, too, have multiplied out of all proportion to their possible need. There is a hospital for every race, for every creed, for every sex, for every age, and at present rates there will soon be a hospital for every disease, and every doctor, and every man his own hospital will nearly apply to Cincinnati. Medical schools, physicians (especially specialists), ministers of the gospel, fashionable ladies, men who have made fortunes by questionable means, as by vending patent medicines, who

"Strive for life-long evil to atone
By building monuments in stone,"

all build hospitals. As a consequence many hospitals are full of empty beds, and some of them are pleading for patients. It will not be surprising soon to see offices advertising cut rates for private patients. The worst evil is, that material which could be utilized for medical instruction is dissipated and lost. Who is so blind as not to see, or so dull as not to know, that a case properly presented to a class of three hundred students means three hundred times as much benefit to suffering humanity as a case secluded in a private house? I am speaking now, of course, of charity cases, which should give some kind of a *quid pro quo*. No hospital is worthy the name which shuts its doors to medical instruction, and people who give to such institutions do exactly the mischief, with, however, good intent, of the indiscriminate alms given at his door.

There is in this city a hospital of this kind which boasts that no medical student is admitted to its wards and no case may be presented to a class. This institution subsists on public charity. It begs from door to door, and is so successful as to be able to send, I am credibly informed, \$60,000 a year to Europe.

It is, of course, impossible, in speaking of these things, to escape a storm of censure and abuse. It will be said that attack is made upon a sacred charity, or there will be a charge of interested motives. If these charities so-called, for they are made to support a host of healthy people, could exist without injury to others, nothing could be said against them, but the truth is that patients are induced to go to them with the knowledge and assurance that they will not be examined or operated upon in the presence of students, and thus they rob better institutions of the best material and threaten to seriously cripple the teaching of medicine in this city. All these charity hospitals do thus far more harm than good. They are cancers in a community, and should be cut out.

Hippocrates declares that "whoever wishes to investigate medicine properly, should proceed to consider the air, the water and the soil." But the less we consider these things in Cincinnati, the better it is for our peace of mind. The air is often not fit to breathe, the water to drink, and it is only within the last few years that a man could walk dry-shod upon our streets.

The air question was settled by the ladies a few years ago. They organized a society, appointed a smoke inspector and removed to the hill-tops, sending their sons and fathers and husbands to the city to survive the day as best they might. These are the unfortunate victims whom we see transported about our streets night and morning suspended in double rows from leather straps.

As to the water, we may hope to purify it only when we may purify our politics, and so long as our patriots are nothing but partisans, the air we breathe and the water we drink are trifles compared with the questions, What shall be the party of our President, and Who shall be our post-master?

It has been repeatedly shown that it is possible to lift the cloud of smoke from our city by the use of fuel gas, and it is the merest alphabet of engineering to put a chain of reservoirs, with settling basins, upon the hill-tops with

which nature has kindly surrounded us; but it is almost dangerous to make mention of these things in Cincinnati. There are vultures who feed upon our misery, and there are wolves who will not permit an expression of an opinion regarding anything connected with politics, so that a man who dares to lift his voice in the interest of humanity, their natural prey, soon finds himself between the vultures and the wolves.

Let me turn from these public to more personal questions, and let the occasion justify the personal reference.

It is just twenty-five years ago this very night since I sat in the row of medical students, and when my name was called in the list, walked with faltering steps to the platform, faced the audience with great timidity, received my diploma with trembling hands, and with difficulty found my way back to my seat.

A quarter of a century has gone since then. Meanwhile I have learned something—I could not help learning something, and it occurs to me that I might tell you some of the things I have learned that may profit you while you are waiting for practice, or when, weary in it, you are wending your way home alone at night under the silent stars.

Just what I may say I scarcely know.

“ Let time and chance determine;
Perhaps it may turn out a song,
Perhaps turn out a sermon.”

Well, the first thing I learned was to correct a very erroneous view which cost me much suffering on that memorable Commencement night. I very soon learned that the whole world was not constantly engaged in looking at me; that each man had affairs of his own which were infinitely more important to him, and that I could hope to engage his attention only by doing him some real service. Then I was forgotten as soon as the service was done. Sometimes, indeed, he forgot to reward the service.

The next thing I learned was that all the places I wanted to fill were already full, and nobody volunteered to vacate in my behalf. Nobody seemed to know that I could fill it better. Thus I was very quickly reduced to two alternatives, to join the great army of the unappreciated and fill my part of the earth with lamentation, or go to work. I chose the latter without subsequent regret, and now recommend it to you. You may be born to greatness in the social scale; you may have it thrust upon you in politics; but you will have to

achieve success in medicine, and there is no other way to reach it.

Stokes said his father left him but one legacy, and that was the habit of early rising. He commenced his work at four o'clock in the morning, and kept it up all day. Buchet lived, ate and slept in the dissecting-room. Louis spent more and most hours in the hospital ward, until finally the entire day. "Nothing is known about diseases of the ear," they said to Toynbee. "Well, I will devote ten years to the study of it," he said, "and, if nothing can be learned, I will tell you the reason why," with what result you know.

Work with a purpose. Desultory work amounts to nothing. It may make an amateur, but never a professional. A few friends may applaud, but the public never turns out *en masse* to an amateur performance. Work with patience. Paroxysmal work amounts to nothing. It, too, makes the dabbler and dilettante. Purpose, persistence, patience furnish finally the power of concentration, and the fruit of concentration is what the world calls the work of genius.

There was a man once who made his living by exhibiting twin monkeys which he bought at the Zoölogical Gardens and trained. After many failures, he said to the keeper: "If you will let me take home six monkeys, I will pay you twice as much as hitherto for the one I keep." "How do you learn their value so soon?" the keeper asked. "Well, I stand them all up in a row, and try to fix their attention. Five of the six will have it distracted by a fly on the wall or a noise in the street. I have no use for them. One looks and listens. That one I keep." In this regard, at least, monkeys are like men.

In no pursuit of life is the power of concentration so necessary as in medicine. It makes the cool observer, the ready diagnostician, the sound therapist. It gives prompt response with fertile resource in sudden emergency, and, above all things, economizes time.

The bane of the life of a medical man in full practice is its incessant interruption. You all know how Hunter explained that he must now leave his work, go down stairs and earn that wretched guinea, as he would be sure to want it to-morrow. Avenbrugger said that he worked out percussion *inter tædia et labores*, and Koch complains of the distraction of routine work. Yet it is in this way that much of the best work of the world is done. "Time," said one of our own strong men, "is the sum of fractional opportunities. Four

fifteen minutes make an hour a day. Will somebody cut that into my tombstone?" Illness, physical disability need be no bar. Some of the best work of the world has been done by sick and disabled men. To say nothing of literature or other fields of science, look at the list of medical men. Floyer lived and panted with asthma up to the age of eighty, writing meanwhile the best work on the disease in his day. Haygarth gave us the best description of modern rheumatism from his own case. Sydenham said: "When I returned to work, the gout returned to me." Nevertheless, Sydenham made his finest fame in his account of this disease.

Brodie, the great English surgeon, was at first so clumsy with his hands as to make him despair of their use. Addison, though deaf in one ear, became the finest auscultator in London, but the greatest calamity befell Ferguson. You remember Ferguson? He got so quick and dexterous that it was said if you once winked while you watched him you would be likely to lose the whole operation. Well, right in the height of his fame and usefulness he married a woman of great wealth, but it never stopped his work. Richard Bright, of Bright's disease, was another example of the use of leisure furnished by wealth. You will not all have to contend with the temptations of wealth.

Days of dullness and depression come to us all. On these days you may do the drudgery that belongs to every toil. Thoughts and principles conceived in moments of inspiration can be executed in hours of dullness and depression. This was said of Faraday, that he worked out problems in periods of dullness that he had conceived when his imagination was most alert and intense. True it is that

"Tasks in hours of insight willed
Can be in hours of gloom fulfilled."

There are the days—the indoor days—in which you may write down what you will have seen outside. When you will have observed something new or different write it down. Publish it to the world. Remember only that if you do but write of the things of the day, you must not expect your writing to survive the day. But it is such a great mistake to think that you may not publish a paper unless it contains original work. Some little thing which you have seen or done may just fit a case for a neighbor or a distant practitioner. Many a time I have been grateful to some unknown fellow-worker for the recall of a forgotten fact. "I have

always thought," said Sydenham, "that to have published for the benefit of afflicted mortals any certain method of alleviating even the slightest disease was a matter of greater felicity to a community than the riches of a Tantalus or a Croesus." "*Omne ævum nobilis*"—noble in every age—is the line his fellows cut on the stone under his name.

Keep up your tone, else you will soon fall into habits of indolence and deprecation. There will then be nothing new, and nothing new can be possible. Be able, at least, to appreciate work that you can not do. Balzac says the first man is the poet, but every man can not be a poet. The brother of the poet is the man able to comprehend the poet. Now, as students you can do it. When you cease to be students you lose it, and life loses all its charm.

You are fortunate in beginning your studies in the dawn of a new day. It is impossible not to recognize the fact that the practice of medicine is soon to be conducted on entirely new principles. The recent discoveries with which the world rings yet disclose principles which are more directly to address the cause of disease.

"Bliss it was in that dawn to live,
But to be young was very heaven."

All the more will it be necessary now to be able to make the diagnosis. Given the name of the disease, and the treatment will suggest itself. What is the name of the disease? How many cases of consumption lurk under dyspepsia, of Bright's disease under headache, of vertebral caries under rheumatism. Inspire your patients with hope. In the most hopeless case,

"Strike him not dead with a denial,
But leave some glimmering of a doubtful hope."

You may be deceived in your diagnosis—Voltaire said: "Only the charlatan is always certain"—still oftener in the prognosis. Once I was standing at the bedside of a dying man with a little crowd of students, trying to emphasize the difficulty of fixing the exact period of death. I had each student write down on a slip of paper his estimate in hours of the probable duration of life, and put it in a hat. Two of my colleagues in the ward at the time joined us in contributions. The periods ranged from two hours to two days. Five years later I got a letter from this patient. He was following the plow in Kansas, he said, and was never in his life in better health. It was a case of pneumo-thorax. The

air which compressed the lung was reabsorbed, the lung expanded to close the break, and the patient made a perfect recovery.

There is hope in the darkest hour. That was a fine compliment paid by Beecher to Flint when he said of him: 'He does me more good by his presence than his prescriptions;' and a finer still of a cheery old Swiss physician of whose patients it was said that 'though they sometimes lost life, they never lost hope.'

There is indeed hope in the darkest hour. Did you ever hear the story of the siege at Lucknow? Carnegie tells it, one of the best of friends to us.

For six long months Sir Henry Lawrence and his devoted little band were surrounded by 50,000 Indian devils. Day after day, week after week, the three hundred women and children, shut in a cellar underground, waited and watched and prayed in vain for the sound of the bugles of rescuing troops. No help came and no tidings of relief. One night the silence was deeper than ever. It was the hush of imminent danger. The poor prisoners lay in momentary expectation of death by cruel slaughter, and death was the least of the evils these poor women had to fear.

Suddenly the air was rent by a piercing shriek as Jessie, the Highland nurse, fell demented to the ground. She had climbed to the narrow window to strain her vision out into the night. Nothing was to be heard save the tramp of the ever vigilant sentry, nothing to be felt save the breeze which fanned her face.

Hark! What is that dear, familiar sound? It is the slogan, the war-cry of the advancing Highland guard. "The slogan, the slogan, didna ye hear the slogan?" she cried, as she fell senseless to the ground. Soon they rallied her, and to their anxious query as to what the slogan was, "It's the MacGregors gathering, the grandest of them a'."

Gentlemen, shadows will fall upon your own lives. In the darkest hour you may hope, and, feeling it, inspire it. In the deepest despair you may listen for the slogan.

Go. God be with you. Good-bye.

ANÆMIA WITH AMENORRHŒA.—By J. M. Fothergill.

R̄.—Acidi arseniosi, gr. j
 Ferri Sulphat. exsiccāt, gr. ss
 Pulv. pip. nigr., ʒj
 Pil. alces et myrrhæ, ʒj
 M. Et div. in pil. No. xl. Sig. One twice a day after meals.

The Epidemics of Diphtheria, Scarlet Fever and La Grippe at O. S. & S. O. Home, Xenia.

Read before "The Ohio State Medical Society," Columbus, Ohio, by C. M. Galloway, M.D., Xenia, Phys. at O. S. & S. O. Home, June 6, '90.

A history of the late epidemics at the Ohio Soldiers' and Sailors' Orphans' Home at Xenia, Ohio, will be better comprehended in the light of a brief history of the founding and growth of this noble institution, so little of which is known to the medical profession of our State and to the public at large. This home for soldiers' and sailors' orphans had its birth in the year 1869, in the councils of the Grand Army of the Republic (foremost of which was Forsyth Post, of Toledo, Ohio), and in the hearts of the philanthropic citizens of Xenia and Greene County, fired by the burning eloquence of Chaplain G. W. Collier, now Past Chaplain-in-Chief of the G. A. R., and Rev. P. C. Prugh, then pastor of the Reformed Church of Xenia.

On June 31, 1869, at a meeting of citizens of Xenia, the assembly catching the spirit of the comrades of the G. A. R., then and there contributed the sum of \$16,500 for this worthy object.

In the meantime the citizens of Xenia and the representatives of the G. A. R. were actively and harmoniously at work. The press, all over the State, favored the project and advocated the erection of suitable buildings at once.

The sum grew to \$30,000, and real estate was purchased one mile southeast of Xenia—a free-will offering of our patriotic citizens—toward erecting a permanent home for the children of the heroes who had fought and fallen in defense of their country.

"To the Grand Army of the Republic in Ohio, to the generosity of the patriotic citizens of Xenia and Greene County, and to the State at large, is awarded the honor of establishing and maintaining one of the noblest institutions known to the civilized world—The Ohio Soldiers' and Sailors' Orphans' Home."

In the year 1870, seventy-one children were gathered at Xenia and supported by the private subscriptions of her citizens, and when a few months later the first Executive Committee met in Xenia they found one hundred children in their temporary quarters, and applications pending for many more.

By act of Legislature the Ohio Soldiers' and Sailors' Orphans' Home became a State institution April 4, 1870, and at that time embraced 100 acres of land and buildings accommodating 250 children. Generous yearly appropriations from the State, intelligently expended by a Board of Trustees, has enlarged it, until now it has become a great educational and training home, in the broadest sense of the term, accommodating almost 1,000 children, with 135 adults engaged in their care and training.

"It embraces $293\frac{23}{100}$ acres of land and forty-eight buildings, composed of an administrative building three stories high, with large dining-room attached, twenty-eight two-story cottages, two three-story school-houses, chapel, hospital, laundry, industrial building, engine-rooms, gas-house, green-houses and all the necessary farm buildings."

Great as is the capacity of this Home, requiring a yearly appropriation of almost \$200,000 for its maintenance, there are to-day almost 1,000 applications on file awaiting admission, for "all limitations as to the death, or cause of death, of the father, have been removed, and any child whose father served in the army or navy, and is now in indigent circumstances, is entitled to admission." Children are taken in as young as two years of age, and are discharged, boys at sixteen and girls at eighteen years of age. These facts are compiled largely from Hill's History of Greene County.

As to the former sanitary condition of the Home, the statistics show that from October, 1871, to October, 1889, there were thirty-nine deaths from various causes, two of these being accidental.

From October 4, 1889, to March 16, 1890, there were thirty-eight deaths among the children; of this number two died of scarlet fever, one from an overdose of aconite mixture, taken while in delirium, during an attack of la grippe, and one from a complication of pulmonary and cardiac trouble.

A healthier natural location, for a children's home, could scarcely be found within the boundaries of our State, for, since the founding of the institution, a period of nineteen years, seventy-four deaths have occurred among the 4,220 children admitted, three of this number being accidental. Ever since the year 1886 diphtheria has been present in Xenia—it is there now—resisting the united efforts of physicians and Health Boards at extermination. On the 29th of September, 1889, this disease made its appearance at the

Home. Two boys in cottage No. 18 were attacked, one dying October 3d and the other October 7th. These were the only cases occurring in that cottage. From this beginning the disease continued with more or less virulence until April 15, 1890, when it ceased. During this time 214 cases among the children and twenty cases among the employes came under the observation of the physicians of the Home—in all, 234 cases, with thirty-five deaths—a mortality rate of about fifteen per cent. About one in ten of these cases presented, during convalescence, the usual sequelæ. A few suffered from relapse.

Scarlet fever, in a mild form, made its appearance about the middle of October. A little girl was attacked while absent on her vacation, and returned to the Home during the period of desquamation. The case was not discovered by matron or physician until others were attacked, and before this disease abated 240 cases came under our care. Two deaths, one complicated with cardiac trouble, occurred from this disease, and as sequelæ, three cases of acute nephritis, easily handled.

The almost entire absence of kidney complication in such a great number of cases was due, it is believed, to the fact that butter-milk was daily given in generous quantity to those able to bear it from the day they were brought into the hospital until they were well. This disease, combined with diphtheria, made a serious and often fatal complication from which a small proportion only, of those thus attacked, made recovery. Scarlet fever disappeared entirely from the Home about January 10, 1890.

La grippe made its appearance about the middle of January. This peculiar disease swept through the institution attacking about every child and employe. Over three hundred children were attacked and confined to their beds in their cottages from four to eight days, and at least one hundred more were confined to their dormitories for a few days, not being sick enough to be put to bed. The care and nursing of this great number of sick children devolved upon the matrons of the cottages, in addition to their usual daily duties, for the reason that all the hospital and convalescent wards, twenty in number, were filled with children, sick and convalescing from diphtheria and scarlet fever complications. Besides, we found, from sad experience, that a la grippe throat was a more fertile field for the engrafting of diphtheria

than was a scarlet fever throat—every child dying that came into the hospital with this complication.

Too much credit can not be given to the teachers of the Home schools (formed by direction of the trustees into a corps of nurses for convalescing wards) for their constant and faithful services. When the schools were closed, these ladies were given option of a vacation until the epidemic abated, or enroll themselves as nurses. Without exception they volunteered to care for the sick children, and remained faithful to the trust reposed in them, although a number of them contracted diphtheria.

The matrons of the cottages are to be commended highly, in that they all remained among their children, caring for the well ones, nursing the sick ones, and, when necessary, enduring the privations of quarantine with their children for weeks and months cheerfully, and without a murmur, faithfully carrying out the following order, issued from the medical department at the beginning of the epidemic:

“Examine, carefully, every child’s throat morning and evening, using the handle of a teaspoon to depress the tongue.

“Examine, carefully, every child’s body, once daily, for eruptions, redness of skin, or scales.

“Children having redness of throat, or ulceration of tonsils, should be kept in their cottages until seen by the physician.

“Children having headache, chill, or loss of appetite, should be reported to the physician at earliest moment.

“Children complaining, should not be sent to school, neither detailed for work, until seen by the physician.”

The faithful execution of the above order entailed upon the matrons, daily, an endless amount of care and toil, and ceaseless vigilance and attention accompanied this work. The following, from the Cincinnati *Commercial Gazette*, faithfully portrays a condition daily met by the physicians: “One of the greatest stumbling-blocks in the way of the physicians is the dread and fear of the disease and the hospital existing in the minds of the children, who, though probably suffering already with disease, would deny that they were in any way ailing, and would endeavor to deceive their matrons and the physician in this respect, although always truthful and obedient.” The ever watchful eyes of the matrons were, however, quick to detect disease, and contagious cases were immediately removed from the cottages.

Employees, as a rule, remained, and discharged duties assigned them, which, at times, were truly arduous.

The attachment and devotion of those in authority, of teachers, matrons and employees, for the children, was truly wonderful. Parents will stay by the bedside of their children, sick and dying of contagious and loathsome diseases, with a devotion that death alone will quench. The world expects, and demands, parental and filial affection and care at all times, and especially in sickness and danger, yet outside of the home circle, as we all know, contagious and infectious diseases are shunned by all. I believe the pages of history may be searched in vain for another instance where the officers and employees of a state institution, surrounded for months by pestilence and death, unflinchingly stood at their posts, and heroically did their entire duty, when hands and hearts grew tired and weary awaiting the day of deliverance, long delayed in its coming.

The following will illustrate the spirit of devotion that prevailed: Major Noah Thomas and his worthy wife, the superintendent and matron of the Home, at the outbreak of the diphtheria, were strongly advised by friends to remove their children, four in number, away from the Home to a place of safety. With that heroism that always inspires the true soldier, he replied: "My children are no better and their lives are no more precious to me than those of the 900 children of my dead comrades under my care. My children will stay here with me, at this Home, and take their chances with the others;" and they did stay, although one of them was stricken with the dread disease, and he, also, was attacked.

Eight cases of pneumonia developed from la grippe; none of these proved fatal. A fatal case of phthisis pulmonalis brings us to the 15th of April, 1890, when our last case was pronounced convalescent; the closed schools and industries were opened, and teachers and pupils once more resumed their accustomed duties.

A complete history of these epidemics with their daily toil and burdens of cares, anxieties, perplexities, hopes, fears, sickness, pain, sorrows and deaths, can never be written. Daily contact was necessary to fully comprehend it.

October 10, 1889, found us in quarantine, and almost completely isolated from the outside world, with 913 children enrolled and present in the cottages, 854 of these attending the schools daily.

These were dismissed by order of the Board of Trustees, and six large school-rooms fitted up and used as convalescing wards, under the immediate supervision of Maj. G. M. Patterson, the efficient military instructor of the Home, who gave us valuable assistance.

The work becoming too great for one physician, the trustees, on October 27, secured the services of Dr. S. S. Wilson, of Xenia, who devoted the greater portion of his time to the care of the sick children until March 15, when, his services being no longer needed, he voluntarily retired from the work. His constant and devoted service was cheerfully given—to the great detriment of his private practice—and too high commendation can not be awarded him for his self-sacrificing labor.

The State Board of Health took cognizance of our condition, in the person of its secretary, Dr. C. O. Probst. The defects of the heating arrangements, plumbing, ventilation and sewerage were pointed out to him, and, after thoroughly inspecting our hospital, which he designated “a death trap,” and approving our system of treatment, quarantine and fumigation, he gave us the unwelcome assurance that we would not be free from diphtheria during the entire winter.

As our little hospital rapidly filled with sick, the trustees gave us three large rooms in the industrial building, and a double cottage with four large rooms, which, with those at the school building, made twenty wards for the sick and convalescing children of diphtheria and scarlet fever alone—the children sick from la grippe being kept in the cottages.

The past winter, as all will remember, was remarkable for the great number of wet and rainy days. Damp weather, we found, greatly increased our mortality rate and the number of new cases demanding treatment. Every cottage from which a case of diphtheria was taken was quarantined, and the inmates fed by a detail of employees. In this manner, eight of the twenty-eight cottages were put under strict quarantine two or more weeks, or until fairly free from disease. The inmates were then sent to convalescent wards in the industrial building, where they remained two weeks with their matrons; the cottages were thoroughly cleaned, painted and whitewashed, all clothing and bedding fumigated and sent to the laundry to be washed in a strong solution of corrosive sublimate. The books, woolen wraps, pillows, tapestry and carpets were subjected first to fumigation from burning sulphur—fifty pounds to each cottage—for seventy-two

hours, and afterward to a dry heat of 275° , for ten hours. This renovating process required about two weeks for each infected cottage, after which the inmates were returned. Notwithstanding all these efforts, two cottages, Nos. 1 and 4, had to be temporarily abandoned. Three times we took the children out of these two cottages, cleaned, fumigated, painted and whitewashed the dormitories and living-rooms; washed thoroughly all clothing, beds and bed clothing and returned the inmates, and as often removed fatal cases of diphtheria, until we had taken out four from one and five from the other.

At one time Governor Foraker sent a committee, composed of Drs. A. G. Byers, of Columbus, and James L. Wilson, of Greenfield, members of the State Board of Charities, bearing to us words of cheer, and, in his characteristic manner, said to us: "Buy, *at once*, everything that is needed for your sick children. The great State of Ohio will see that all the bills are paid." This committee spent an entire day with the sick and convalescing children, and gave us valuable suggestions.

In February, Governor Campbell and the General Assembly of Ohio appointed a committee, composed of Drs. C. O. Probst and F. C. Hoover, of Columbus, and Prof. E. T. Nelson, of Delaware, members of the State Board of Health, to investigate the sanitary condition of the Home. This committee spent about three days with us. At their suggestion, the floors of the two infected cottages, Nos. 1 and 4, together with the plumbing, were taken out and replaced by new. The cottages were then put in order and the children returned. No new cases have occurred in these buildings since. This committee also favored us with valuable suggestions.

Thus the weary days sped along, each day bringing new cases into the hospital, and sending into the quarantine wards others who, properly bathed, disinfected and clothed, had passed through the crisis and were convalescing.

The following were the methods of quarantine: From the hospital the children were sent to the wards in the industrial building and put in charge of nurses, where they remained two weeks. If no new cases developed, from there to the wards in the school building, where they stayed two weeks longer, when, if there were no new developments, they were sent to their cottages and kept under observation one week longer. They were then allowed to go to

the dining-room and mingle with the children. Any child suffering from relapse was sent back to the hospital and passed through the wards again.

The continuance of these diseases, through so many months, very naturally aroused great anxiety among the parents and friends of the children all over the State. This anxiety was intensified an hundred-fold by false and sensational individual reports and the wild rumors printed in a few of the newspapers of the State. The Cincinnati *Enquirer* sent a special reporter to the Home to obtain the facts, and in its issue of November 25, 1889, is found an accurate newspaper account of our condition at that time. The *Xenia Gazette* and *Republican*, the Newark *Daily American* and the *Home Weekly* presented, from time to time, accurate reports, and did much to allay the fears of those whose loved ones were almost entirely cut off from communication with the great outside world and its sympathy.

In the month of January, Superintendent Thomas, enfeebled by an attack of la grippe, contracted diphtheria and for six weeks his life was despaired of.

Mrs. Hardesty, the matron of the hospital, worn out with constant care and attention, suffered from a severe attack, of four weeks' duration, and at different times all our nurses contracted the disease. At one time nurses could not be obtained at any price, and a brave girl, eighteen years old, with a noble, Christian heart, volunteered to help us. After a few weeks' work she was stricken down, and died in four days. Her brother, Wilber, aged sixteen years, came to her dying bedside, under protest of the physicians, and in a week afterward he died. Her mother, also, had a light attack.

We buried this brave girl in our beautiful little Home cemetery, among those she loved so well, and whose call for help she answered with life.

Among the recommendations made by the Committee of Investigation appointed by Governor Campbell and the Legislature, were the following:

"A new hospital for general diseases should be built at once. It should not have less than one hundred and fifty beds, and be constructed on modern plans. The present hospital should be remodeled by dividing the larger wards and providing a separate entrance to each, and used as a quarantine building. The heating of each ward should be

properly regulated and provision made for increasing the ventilation of each ward."

In searching for a cause for the diseases prevailing at the Home during the past winter, we have not far to go. Scarlet fever was brought to us by one of the children. La grippe was almost universal throughout our State, and we did not hope to escape its presence. As to diphtheria, it has prevailed in Xenia for the past four years; it was prevailing in our city last winter and is present there now. A number of the employes live in Xenia, going to the Home every morning and returning at evening; besides, visitors daily go to and fro, not only from Xenia, but from different parts of the State. Under these conditions, intelligent minds were not surprised when diphtheria appeared among the children; indeed, it was a marvel it had not reached the Home sooner.

The cause for its continuance was not to be found in the overcrowded condition of the cottages, for they have always contained from thirty-two to thirty-six children, each. It was not due to the amount or kind of heat, or the methods of ventilation of the cottages, for these have been the same for many years. Neither was it the fault of the plumbing or sewerage, for careful examination revealed little or no defect in either, although both were of old style and pattern. The drinking water was from the same source as for the past nineteen years, and was not the cause of the disease from which we suffered.

The continuance of diphtheria is to be found in the fact that hospital accommodations for 250 children were, by our Legislature, deemed as sufficient for 950. Time and again had our law-makers turned a deaf ear to our urgent calls for a more commodious hospital.

The little "death-trap" building, with its seven small wards and fifty-two single beds, was all we had when the epidemics burst upon us with the force of a tornado. Had we had hospital accommodations in proportion to the number of children enrolled at the Home, I am prepared to make the statement that the epidemic of diphtheria could have been more easily and more quickly handled.

The Consideration of Some Questions Regarding Puerperal Fever.

THE THEORIES OF THE ETIOLOGY—THE INTRA-UTERINE DOUCHE—THE USE OF THE CURETTE.

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A former student of mine, now practicing in Michigan, reports that a neighboring practitioner has lost twelve parturient women during the last six months. An examination of our mortality reports always shows deaths from puerperal causes, and an inquiry among obstetricians and midwives will reveal the fact that deaths from fever, malaria, etc., occasionally take place. Many say that they have never seen a case of child-bed fever, but nevertheless deaths occur.

I need not speak of the terrible mortality which has been present in times past in the large hospitals of the Old World, such as in the Hospital Lariboisiere, where it has been eight per cent., or in the Maternity in Paris, where it was formerly ten per cent. In Berlin at one time there was one death from child-birth in every one hundred and fifty-two confinements, and in Vienna ten per cent. were lost. In all probability it has arisen to fifteen per cent. during some epidemics. Notwithstanding these figures we have men in our profession who say that parturition is physiological—a process as natural as the digesting of food. If it is a physiological process, surely something is wrong and we need to study it, and if it is pathological, with such a mortality it is certainly our duty to investigate the causes that bring about such terrible results.

It seems that it should be enough that a woman pass through all the discomforts and inconveniences and solicitudes of pregnancy, and the pains and anxiety of parturition, without being subjected to additional dangers at the close of these processes. But it is not so. During the few days following there comes about, in almost a multitude of cases, such a series of unfortunate results, that many of the most valuable members of the community, and among

them those who are surrounded with the most beautiful prospects for the future, are consigned to young and untimely graves.

It is a well-known fact that in Carl Braun and Spaeth's wards in Vienna, the mortality has been reduced to 56-100 of one per cent., or a little over half of one per cent.

As I walked through their wards during the past summer and came into rooms where thirty women had been confined during the preceding thirty-six hours and would find the air in that room perfectly pure, absolutely free from odor, and every one with normal temperature, or so nearly normal that it is not worth mentioning, and then remembered that in private practice, with only a single woman in a house, and sometimes in new residences, where contagious or infectious diseases never existed, most terrible odors and high temperature and continuous fevers were sometimes noticed—indeed, a much worse condition with a single patient in a private house than was noticed in a ward with thirty patients in a hospital atmosphere—I was convinced that their method of practice was worth imitating.

In those wards when a woman's temperature rises to 103 she is given a uterine douche, and the curette is frequently used. I provided myself with the necessary appliances and determined, should occasion demand, to try their efficacy. I did not wait long. A few days after my return I was called to see a case in this city, with the following history: A young woman from a neighboring State came to the city and had a criminal abortion performed. At the end of the week her symptoms were so alarming that she changed physicians. He found her temperature 103°, and called me in consultation. Intra-uterine douche of carbolyzed water did not bring it down, and she was curetted and a considerable amount of membranes and debris was brought away. A coil was placed upon her abdomen and her temperature, which had been 105¼, came down to normal in twelve hours, and she made a recovery without a single bad symptom.

Case 2. A lady on North Hoyne avenue was confined and did well until the tenth day. I was requested to see the patient and found her temperature 104. Gave intra-uterine douche and curetted. Temperature came down and she made an excellent recovery.

Case 3. A lady on the South Side aborted at the end of four months. It is probable that this loss was from gonor-

rheal infection. Temperature the second day 104 1-5; anxious look; bad pulse; more or less distention of the abdomen. Symptoms were all bad. Gave intra-uterine douche and curetted. Temperature came down to normal the following morning and she made a good recovery.

Other cases have been operated upon, and in every instance where contra-indication did not exist a favorable result has always taken place.

Operations undertaken as the last and only resort have not been uniformly successful, but no bad symptom has ever been produced.

There is no doubt in my mind but that puerperal diseases are more frequent than many are willing to believe; that they take place frequently in the practice of physicians who say they have no cases of puerperal infection or puerperal fever. It demonstrates that we need to study this matter to a greater extent than ever before.

Of the three cases which I briefly narrate, the temperature coming down at once, and an excellent recovery taking place, it is safe to say that without the operation they would have had a lingering sickness with all the symptoms of septicemia. It is possible that one would have died, and entirely probable that those recovering would have had an illness of from three to six weeks.

Where does this disease come from? Are we always certain that all of the membranes and all the placenta come away? Can any one always tell by an examination that there is not a small amount of debris still remaining in the uterus? Do all practitioners examine the placenta carefully? Are these women poisoned by themselves, or must the doctor or nurse bear the responsibility?

These are some of the questions which come to me as I write. Of course I can not consider them all in this paper.

I desire more particularly at this time to speak of the retention of membranes and small pieces of placenta as a cause of puerperal fever, but in order to understand the relation between these substances as the cause of this terrible disease and *other* factors which enter into the etiology of puerperal fever, it will be profitable to discuss very briefly a few of the different theories respecting this disease.

The great fight carried on during the past forty years has been to decide whether puerperal fever is produced by causes from within or from without; in other words, is pu-

puerperal fever autogenetic or heterogenetic? It is entirely useless to discuss old theories which long since have been, or should have been, consigned to the museum of antiquities, and so it will not be profitable for us to speak of any theory previous to the time when Semmelweiss, in 1847, advanced his theory. In the main this was that puerperal fever was due to absorption of decomposing matter and that it may come from either *auto* or hetero infection.

Among our own countrymen the ideas advanced by For-dyce Baker have held firm sway. I will not give his entire confession of faith, as he terms it, but will quote briefly from it.

He believes that the disease comes from some unknown blood change, and that we are as ignorant of it as we are of the blood changes in scarlet fever or any of the other essential fevers. He believes that it may be epidemic, infectious and contagious. He says in conclusion that septicemia may be developed in a puerperal woman either from autogenetic or heterogenetic infection, without puerperal fever, but that this infection may also complicate puerperal fever. In the celebrated discussion on puerperal fever in New York in 1884, he held substantially the theories advanced above, although his ideas were promulgated in 1874.

One other authority in this country has studied with very great earnestness the germ theory of puerperal diseases, and his opinions are held in very high regard, not only by us, but by foreign authorities. I refer to Prof. Lusk, who, with some restrictions, evidently believes in the germ theory, but says the difficulty is best solved by assuming with Genzmer and Volkmann that there is such a thing as an aseptic surgical fever, due to the absorption of the products of physiological tissue changes at the seat of injury. He also says that we never can exclude the possibility of infection in puerperal wounds, and in the sixth proposition in which he discusses the subject, he uses the following language: "In the present state of our systematic knowledge it is necessary to admit that there is a limited number of febrile and inflammatory disturbances occurring in puerperal woman, the bacterial origin of which may be fairly questioned."

Parvin, in his late work, is probably more in sympathy with advanced German ideas on this subject than any other American author. He says the doctrine of autogenesis is a confession of ignorance, the creed of fatalism, the cry of

distress. Self-infection means that the house sets itself on fire, and that the powder magazine is exploded without any mischievous spark, and that this doctrine of the autogenetic origin of puerperal septicemia is, to his mind, the very pessimism of obstetric medicine. He concludes by exclaiming: "Why should the city guard its gates when the enemy can already be in the citadel and begin the battle there?"

We now turn to the English authorities. Galabin says that the first possible internal source of poison is the blood itself. Owing to the rapid absorption accompanying the involution of the uterus, a large quantity of effete material is poured into the blood to be disposed of by the excretory organs. He discusses both autogenetic and heterogenetic forms of the disease, and says that even in autogenetic forms the poison is generally produced by germs received from the air, or some way from the outside, and that the sanitary condition of the house or locality may have a great influence.

Barnes, in his work of 1885, certainly believes in the autogenetic origin of puerperal fever, and describes rather fully what he calls excretory-autogenetic puerperal fever. Speaking somewhat in doubt in regard to the germ theory, Barnes asks how these infective microbes are introduced. He makes the statement that some women are attacked with puerperal fever before labor, and also asks the question: "How do organisms find entrance into the system in those most terrible cases of all in which death results in a few hours?"

Let us now examine into the teachings and methods of practice of Continental authorities—the German, French and Italian teachers.

In the main I think they agree as to etiology. If the question is asked in regard to the probability of recovery after a given obstetrical process or operation, the reply has come to us repeatedly: "She will recover, if I have not infected her."

The summary of everything is that puerperal fever in every instance is produced by some cause from without; that there is no such thing as autogenetic infection. Retained membranes and placenta, according to this theory, are perfectly inert if infection from without does not take place. This makes the responsibility simply terrible. Kucher,

speaking on this subject, acknowledges that a physician has a perfect right to his own theories, but says that in a question of great consequences no such liberty can be permitted.

The cause of puerperal fever is infectious matter which undoubtedly exists in many forms, and gains entrance into the system in many ways. Whatever the supposed cause, as we formerly thought, whether contused tissue or clots, or pieces of membranes or placenta, it is now believed that the additional element of *infection* must be obtained from some source foreign to healthy tissue. It is explicitly stated by some authorities that blood coagula and pieces of placenta in a uterus *firmly contracted* is perfectly inert, unless infection takes place. In the main matic infective disease, the microbes or their germs must come from without. He makes some statements which modify this to a certain extent, but he is coming to believe, as is evident throughout his entire oration, in the impossibility of autogenetic infection.

Every practitioner of experience has seen pieces of placenta and quite large clots of blood come away and no signs of fever follow. On the other hand, the same practitioner has seen pieces of placenta or small clots expelled by the intra-uterine injections which had been ordered after a high temperature with sepsis undoubtedly present. What makes the difference? Simply this: In one case the debris has escaped infection; in the other, for some cause (sometimes absolutely undiscoverable), the debris has become infected.

I do not believe it is possible that we can ever be sure that every particle of placenta or all of the membranes are expelled, no matter how careful we may be in the examination.

Inasmuch as it is impossible in the present state of our knowledge to always say that our hands and instruments, and the hands and appliances of the nurse, are perfectly aseptic, it is our duty to take extraordinary precaution in regard to the introduction of septic matter. Not only this, but we should inspect the placenta, wash it out and place it together to look for small pieces that may be absent. With all these precautions we can not be certain that everything has come away. There may be small pieces of placental tissue which have existed on the membranes somewhat remote from the main body of the placenta. These may be entirely detached from the membranes and no earthly power can detect it. And then there is evidence

sometimes that all of the decidua does not come away—that there is something of this left in the uterus. There is no doubt but that we have very frequently some debris left in the uterus, which will give rise to septicemia if only an infectious element comes in contact with it.

It appears to me that in the present state of knowledge no one is justified in disbelieving the germ theory and not taking the precautions which have given such remarkable results in some of the lying-in hospitals. I quite agree with the authority whom I have already quoted, that we have no right to take such a great responsibility as to be disbelievers, even if we can not accept all the advanced ideas of the German teachers. Their results have been so good that we are not justified in practicing obstetrics in the slipshod way in which a great many of our practitioners have practiced, and it is to be feared are practicing to-day.

One of the most valuable contributions to our present state of knowledge in regard to micro-organisms and suppuration has recently come to hand in a prize essay furnished by George Klemperer, an undergraduate clinical student in Berlin. It is in regard to the question as to whether the irritants in the tissue will produce suppuration when no bacteria is present. It is regarded by this gentleman that the precautions taken by previous experimenters, who have gone over this subject before, to prevent entrance of germ into the tissue cavities containing these irritants have been uncertain and inadequate. He has gone over the method formerly adopted by Straus, of Paris, in 1883, and his process is something as follows:

After producing an eschar on the skin with a Paquelin cautery, he introduces the canula of a sterilized syringe through the eschar beneath the skin. After the puncture is made he again occludes that opening with cautery. Such irritants as turpentine, croton oil and mercury are used, and with the above precautions in three cases only has pus containing micrococci been found. A considerable degree of inflammation is produced by this injection, but no pus. Among his conclusions are the following: Injections of alkalis, organic or inorganic acids, never produce suppuration, if micro-organisms be excluded. The irritants mentioned above produce violent inflammation, but no suppuration. If the results of these experiments are demonstrated to be true, it will be safe to say that no suppuration occurs unless through the agency of micro-organisms, and its bearing on

infection of pieces of placenta in a contracted uterus will be important.

Another question in regard to these organisms in healthy tissues has been recently gone over by Hauser of Erlangen with the result that micro-organisms do not occur in tissues of healthy animals. All of these arguments and investigations go to prove that autogenetic poison is impossible; and, consequently, if our cases are followed by sepsis it must be due to an infection which has come from the outside.

Dr. Galabin, in his Hunterian oration on the etiology of puerperal fever, delivered recently, used the following language: (It will be remembered that in the early part of this paper I quoted from an obstetrical work of this gentleman, and in that he leaned toward the autogenetic origin of puerperal diseases.) He says in substance that the old divisions of puerperal fever into autogenetic and heterogenetic classes may clearly be regarded as a less radical and scientific division when it is remembered that in every case of true traumatic infective disease, the microbes or their germs must come from without. He makes some statements which modify this to a certain extent, but he is coming to believe, as is evident throughout his entire oration, in the impossibility of autogenetic infection.

If it is true that some debris may remain in the uterus notwithstanding the greatest possible care, and also true that the most ardent believer in the germ theory sometimes has infection following his obstetric procedures, it seems to me that the operation of relieving the uterine cavity of this poisonous matter, if it can be done early, is one of the first operations to which we should resort in the cure of this dreadful disease.

In every parturient woman whose temperature goes to 103, something should be feared. It will not do for us to fold our hands and try to convince ourselves that it is a little malaria, or that it is milk fever, or something that may not jeopardize the life of that woman. I am free to admit that we do occasionally have a temperature of 103 to 104 which is trivial and disappears in a very short time. On the other hand, I do know that a great number of practitioners who try to convince themselves that this temperature is not due to septic influences, have these cases which last, with fever, and sweats, and prostration, for weeks, and sometimes months.

It has appeared to me that in the majority of cases that I have watched carefully, that the first explosion, the result of infection, takes place about the third or fourth day and again about the seventh or eighth day. If the uterus of any woman whose temperature goes to 103° on the fourth day could be thoroughly washed out in a way which I shall describe, it is my belief that a very large number of them would have no more fever, that they would have a safe puerperal convalescence. If they are left until the seventh or eighth day, until the second explosion, in many cases the infectious matter and the prognosis will be more grave. Intra-uterine injections first of carbolyzed water, or, if sublimate solution is used, the uterus must be washed out with perfectly pure water. Then if the temperature does not go down the following day, the curette should be used with all possible antiseptic precautions. It does not do to use the finger as a curette, nor does it do to use the small short curettes, as they are entirely inadequate and do not reach the point of disturbance.

If puerperal fever is due, in a given case, to a poison introduced through the lungs, and the general system is invaded before confinement, of course neither intra-uterine injections nor curette is admissible. If, too, the infection comes from an inflammation or suppuration in the tubes, which may have been latent till the irritant and traumatism incident to parturition takes place, these two curative agents are not indicated. But if they can be excluded, we must look along the genital tract for the place through which the infection has taken place. If no abrasions are found and the odor does not disappear with the ordinary vaginal douches, then it appears to me we must look to the cavity of the uterus.

The Operation—Intra-Uterine Injections.—I have in the first place a piece of good-sized rubber tubing, one end of which is provided with a sinker and the other with an apparatus for regulating the amount of fluid running from the tube. An appliance may be placed upon the tube which will catch upon the side of the pail or pitcher, and serve to keep it in place. The intra-uterine tube is of glass about fourteen inches in length, somewhat smaller at the uterine point, grooved on the front and back with good-sized perforations. The operation is best done if the patient is placed upon a table with an oil-cloth under her extending to a slop-jar on the floor, so that all the fluid shall run into this recep-

tacle. The external genitalia should be made thoroughly aseptic, then the vagina should be thoroughly douched, and the speculum introduced. The uterus may now be pulled down with the vulsellum and an intra-uterine douche given. There is no rule that can be given in regard to the amount of fluid which should be used at each time, but each operator must judge for himself. Carbolized water should usually be used. Injections of bichloride solutions in the uterus at full term have been followed by mercurial poisoning, and it is not now regarded as good practice to use this agent. If for any cause it should be used, the cavity of the uterus should be washed out with pure water to rid it of the mercurial salt. The operation may be concluded by the introduction into the uterine cavity of a suppository of iodoform, containing from fifteen to seventy-five grains. Experience has taught us that it is safe to use as high as seventy-five grains. Any amount above that may be followed by symptoms of iodoform poisoning. If at this or any subsequent time it is deemed advisable to curette the uterine cavity, the same steps in the operation are taken, including at first an intra-uterine douche to clear out all the septic material that is possible, and then using the curette.

Curetting the Uterus.—The instrument I have been in the habit of using is twelve and one-half inches long. It is not flexible, although I am not certain but that the instrument would be improved for some cases if it was. Its operating end is provided with a dull fenestra about three-quarters of an inch in diameter. A little experience teaches one where to find the site of the placenta, over which the curette is drawn, using, of course, only a small amount of pressure. After this is completed, the instrument may be passed around until the entire uterine cavity has been carefully but entirely scraped. This being completed, a very large uterine douche should be given, and then an iodoform suppository introduced. In several cases the temperature has gone down within a very short time, and the patient made a recovery without a single bad symptom. A coil placed over the abdomen is a very valuable adjunct to be used immediately after this operation when the temperature is high, and it is also an important agent to prevent any inflammatory action which might follow the operation. In part of the cases, I am in the habit of giving an anesthetic, but in others the patient stands the operation well without this agent.

Selections.

Allegheny County Medical Society.

Special Meeting, December 16, 1890. W. S. Foster, M.D., President, in the Chair.

ALBUMINURIA AFTER TYPHOID FEVER.—*Dr. Batten:* A girl eleven years of age convalesced and became apparently well, September 9, after a malignant attack of typhoid fever. On October 24 she had a shuffling walk and depression of the left shoulder. She also had pain in the abdomen. The following morning I visited her and concluded that the depression of the left shoulder was from irritation of the spine. Upon examination of the urine, I found that it was highly charged with albumen, and there were no symptoms of paralysis except the depression of the left shoulder. She had use of her left leg and arm, but did not use them as well as she did the right. I put her to bed, cupped her over the back and applied poultices over the abdomen and put her on nitro-glycerin. She did not appear to improve under this treatment, and I changed it to iodide of potash in doses of five grains every three hours. Under this treatment, the albumen diminished and finally disappeared, and the shoulder took its normal position. On November 30 I discharged her, well. It is the first case of albuminuria I have had following typhoid fever.

FRACTURE OF THE RADIUS.—*Dr. Murdoch:* My attention has been called to an article in the *Medical News*, a paper by Dr. Roberts, of Philadelphia, which was read before the Academy of Surgery, two weeks ago. The title of the paper is "The Uselessness of Splints in the Treatment of Fractures of the Lower End of the Radius." The paper itself is interesting and the discussion which it elicited also, and as there were points made by Dr. Roberts which I heartily approve of, and which differ from those usually received by the profession, I think it interesting to revive the old hackneyed subject of fractures of the lower end of the radius. There is no fracture that has been more discussed, there are points not yet settled, and difference of opinion among good surgeons. It is comparatively a few years since this fracture at the lower end of the radius was thought to be a dislocation, and was so regarded by all surgeons not one hundred years ago, and always described as a disloca-

tion. Some surgeons contend that the fracture is always caused by cross strain in hyper-extension of the wrist. But so good a surgeon as Dr. Stimson, of New York, argues that it never occurs in that way; that it is generally the result of a compressing force, the shaft of the radius being driven into the fragment of the bone by a downward force. He asserts that in the living body the strain can not be in such a way as to produce this fracture. The fracture, as you know, occurs about half an inch above the lower extremity of the joint, from three-eighths to three-fourths of an inch from the lower extremity of the radius, and the fragment is driven upwards and backwards upon the shaft, and described by all surgeons as the silver-fork fracture. The fragment is driven upon the shaft. The reason so much difference of opinion exists is owing to the fact that different surgeons see cases of this fracture produced by different degrees of violence. As we usually see the fracture, it occurs in old ladies slipping and falling and receiving the weight of the body upon the bones, and the radius gives way by a slight amount of violence; these are the most common cases. But surgeons like Dr. Moore, of Rochester, who have made *post mortem* examinations of patients with fractures of the radius, give an entirely different account of it. Dr. Moore relates the case of a patient who fell from a third-story window in a lunatic asylum, head foremost, striking on both arms; there was a fracture of the lower end of the radius and a crushing of the lower fragment, also a dislocation of the ulna. In this case the styloid process of the ulna was entangled in the annular ligament.

In the treatment of this fracture at first the pistol-shaped splints were applied, for the purpose of abducting the hand toward the ulnar side, and all the splints for a great many years afterward were of that type. The idea being to draw the hand to the ulnar side, supposing that by that movement the lower fragment would be drawn down into place. Then, again, Gordon, of Dublin, advised a splint by which the hand was flexed, and Dr. Kearns has a splint of his own, the retro-flexed splint; and there are still other varieties. Now, here comes a good surgeon who asserts that all these splints are useless. I am inclined to think, looking back upon several of my own cases, that he was practically right. If we recollect how loosely the carpal bones are connected with the radius, and the great amount of motion that the hand normally has, in flexion and extension and lateral

movements, the idea that one can influence the position of the lower fragment by altering the position of the hand, seems absurd. The hand was flexed towards the ulnar side because of the mistaken impression that there was a close connection between the ulna and the cuneiform bone, and that by pulling the hand in that direction, the lower fragment would be pulled into place. Owing to this loose connection between all the carpal bones, it is impossible to influence the lower fragment by any position of the hand. This is true whether it is flexed or turned to the radial or ulnar side, or whether you retro-flex it after Dr. Kearns. You do not by any of these methods influence the lower fragment, which is only three-fourths of an inch long. Besides, if you put pressure enough upon the fragment to influence it by any splint, you are very likely to stop the circulation in the hand. Professor Hamilton has related five cases of gangrene of the hand by tight splints in this connection. The vessels are so easily compressed that the circulation is readily cut off, and any pressure by splints that would be likely to influence the lower fragment, would be likely to arrest the circulation in the hand. The chief deformity, after this fracture, is the stiffness of the fingers. What is the cause of this stiffness? It is asserted usually to be that the fingers are kept still for so long a time. But this is an error. The stiffness in the fingers and wrist is owing to the inflammation in the joint itself, and in the sheaths of the tendons. What is it that causes the inflammation of the joint and in the sheaths? It is, no doubt, largely due to the proximity of the fracture, but is it not probable that a good deal of it may be caused by this strong pressure made by the splints? The fact is, gentlemen, I have seen, as Dr. Roberts says he has seen, cases where splints were put on without any reduction of the fracture whatever. The idea is too prevalent that a fracture can be treated simply by a splint. A fracture of the radius usually occurs in a transverse direction, and if the fracture is reduced, *i. e.*, the fragment put back where it belongs, nine times out of ten it remains there without a splint. I say this is usually the case. This fracture differs from other fractures. Usually we can reduce a fracture easily, the difficulty being its retention. In this fracture, the difficulty is in the reduction, retention is easy. When reduction is accomplished, all that can be done is done. The fragments fit into each other—there is no muscular action to displace

them. Generally speaking, you have done all you can do when you have reduced the fracture. This is so when the case occurs through a minimum amount of violence. In these fractures in the lower end of the radius, where the shaft of the bone is driven violently against its lower extremity, and the lower fragment is split and crushed—pulverized, as it were—you will not be able with any splint to prevent a deformity. A portion of the bone has been lost. I do not go so far as to say splints are useless. But I assert that so far as the replacement of the fragments is concerned, the reduction is the principal thing to attend to. I have seen, within a week, a patient come to my office with a Colles' fracture two weeks old, with the fragment out of place as much as it was at the time of the accident, and was able, with a good deal of force, to reduce it. The man had on a Gordon splint. I have within three months seen five or six cases of this fracture. I believe that the kind of splint is not important. I think it is well to put on some kind of a splint. A fracture so near the joint must necessarily be painful to the patient. I think for comfort and quiet, it is well to put on some kind of a splint to abolish motion, but only for that purpose. If the fracture is reduced, it will remain reduced. If the fragment is crushed, then no splint will lessen the deformity. I also believe that one of the principal things to be observed in the treatment is, that no dressing shall be put on so tightly as to press upon the sheaths of the tendons, for this contributes to the stiffness in the joints. Passive motion, as I have already said before this society, I do not believe in. I believe the fracture should be kept quiet until there is some union between the fragments. In the treatment of this fracture, the important thing is to reduce it.

Dr. Thomas: I would like the doctor to tell us whether he meets with uniformly good results or poor results. I have seen a number of cases of Colles' fractures, and I must say my results have not been perfect. The doctor states the important thing to do is to reduce the fracture; if you have done that, you have done all that is necessary. Now, I take issue with the doctor there. I do not believe the principal thing is to reduce the fracture. The difficulty in the fracture is the question of deformity and the amount of dislocation of the ulna. If I get a case of fracture with dislocation of the ulna, I know I am going to have trouble. If the bone is entangled in the annular ligament, and if I

can get that bone reduced, I do not care so much for the fracture. I had a case of that kind, within the last three months, in a woman about sixty years of age—a dislocation of the ulna—and I thought I was going to have a very good case, and I think I will yet. I do not believe in any special splint. If you can succeed in reducing the ulna, any kind of a splint will keep it in place, and the lighter the better. In this case I applied anterior and posterior splints, and bound very lightly and only allowed them to remain on the hand ten days. Then I took off one and allowed the other to remain. At the end of four weeks I took off the other splint, and I observed what I did not when I dressed the hand—there was much more deformity at the wrist joint than at the back of the hand. In other words, inflammation had been going on in the coverings of the tendons and the tendons themselves. I expect this is about as good a result as we can generally get in a Colles' fracture. The doctor says the splint produces this inflammation. I believe it is the original injury. I think the trouble in the tendons is altogether from the injuries received at the time. If some one would tell me how to reduce the ulna, I would feel that I could treat these cases very well.

Dr. Brashear, of Cleveland: This subject of fracture is always one of much interest to me, and it seems to me we are slow in learning the best and most successful methods of treating this most common fracture. When I began the practice of setting bones, the first splints I used were two splints, cigar-box splints, and when the ulna was not displaced, my success was satisfactory. If it was displaced, I suppose my success was about equal to that of my contemporaries. I used, I think, nearly all the splints up to the time when I ceased the use of a splint for a fracture. I have used the splint of Dr. George F. Shrady, of New York, which is a simple one, but it puts the hand in a cramped shape—painfully so. I still have a splint of that kind, and would like to put it in some museum. Then I used the pistol-shaped splint, which I made myself; and I have used the splint of a former member of your society, George McCook, of this city. Perhaps about the year 1868 I ceased using splints for this fracture. I have not used a splint since, and I have no intention of using a splint for Colles' fracture, and will not use one unless I see some splint that will produce better results than the method I employ. The gentleman who introduced this subject spoke

of the case Dr. Moore had the opportunity of studying, that of a patient who fell from a third-story window upon both hands, and had a double fracture. The *post-mortem* was made very soon after death, and the details of that case were very intelligently written out and published. Shortly after I had occasion to make a *post-mortem* of a fracture. I desired to see whether the short fragment was in relation to the hand, as asserted by Dr. Moore. An old lady fell backward down a step twelve inches high, and in falling put out her hand to save herself, and was picked up dead, carried into the house, and I was sent for. We arranged for a *post-mortem*. I was anxious to see this fracture, because I was then engaged with the dressing of Dr. Moore, and this *post-mortem* demonstrated that the small fragment was turned sidewise. I found it exactly as Dr. Moore said it would be. The study was a very interesting one. I saw the mechanism of the fracture, if the ulna can be replaced, and since I have been following the method of Moore, I have not found one which I could not restore. After that is properly restored, the rest of the treatment is simple; it is very easy and no splint is needed. Professor Moore puts a little roller bandage, the diameter of which will not exceed the thickness of the wrist and about an inch wide, on the palmar surface and just back of the wrist joint, allowing the weight of the hand to make the extension; this is surrounded with a bit of adhesive plaster as wide as the bandage, put on moderately tight. I can not say too much in favor of Dr. Moore's method, and that was published a good many years ago. Why we do not all use it, I do not know. I should be very sorry to have a roll call of my patients treated with the pistol splint. I think that is the worst of all; it is the worst a man can do. Better do nothing.

Dr. Daly: This subject at once calls to my mind the experience I had with our friend, Dr. Brashear, sixteen or seventeen years ago. I was present when he dressed the fracture in the manner which he has described. I watched the case with considerable interest, and his results, as I remember them, were satisfactory. It is well known to all gentlemen who have treated fractures that you can not lay down any hard, fast rules for all cases. It is true, I have not treated a fractured bone for many years, at least no other fracture than fracture of the nose. But for many years previous to the many years I speak of, I treated a

great many when in general practice, and as I recall the cases which I had, I have no great sense of pride in my results. I believe that at one time I gave considerable amount of study to Colles' fracture, made some dissections, and the outcome of that study was a paper which I read before the Mott Medical Club. As I remember, the position I took then, if I were engaged in the practice of surgery and treatment of fractures, I would probably take now. We, as surgeons and physicians, ought, upon general principles, to combat whatever evils may result from accident or disease. Now, we all know the greatest evil of a fracture is the transferring of the axis of the hand to the radial side. If you will examine a given number of fractures in which there have been bad results, you will find a prominence of the styloid process of the ulna, as I say, the transferring or bringing over of the axis of the hand to the radial side. After seeing our friend, Dr. Brashear, dress this fracture, I am not quite sure that I did not call him in consultation with my next case. I can not remember particularly, but I have a general recollection that the cases treated by the method he speaks about, were followed by as good results as the cases wherein the method I was so fond of using, was employed. This was the method proposed by Dr. Walter, of Pittsburg. The results in treating Colles' fracture by the Walter splint are usually good. So, to sum up, it is about like this: While Dr. Murdoch very justly says, a very important point is to reduce your fracture, that of course we know is an important point with all fractures; there is another important point which appeals to every one who has had experience. That is, to use measures as simple as possible to retain your dislocated or relocated bone in apposition, and we who have had experience know that it is not easy to retain the dislocated or relocated bones in proper apposition. The most important point is to retain your bones in apposition. Do not pin your faith too closely to the non-splint treatment, and do not pin your faith too closely to the splint treatment. I am very much pleased indeed to have had this subject brought up.

Dr. Batten: I am of the opinion of Dr. Murdoch, that, if you once reduce the fracture properly, it makes little difference what sort of a splint you use. I have used all kinds of splints; I have made splints of my own, pistol shingles with roller bandage on the ends, and had good results with them. But I have always been very particular to reduce

the fracture properly. The first time my notice was drawn to Dr. Moore's treatment with a simple plaster, the patient was under the care of Dr. Brashear, and I do not know whether it was the same patient Dr. Daly speaks of, but my recollection is that it was. I believe that some patients are more susceptible of inflammation than others. I have treated cases that would have no difficulty with inflammation, and then again others where there was great trouble. The last case I treated was a woman about forty years old. She gave me a great deal of trouble for about six months, but at the end of that time her arm became very useful and there was not any deformity.

Dr. McCann: This subject will always be a source of discussion. There are cases which will recover without deformity, and others which will not. The fractures in the vicinity of the wrist joint are really three. First, Barton's fracture, which simply consists of a sliding off of the portion of the radius directly into the joint, a fracture which, although Barton saw and described, he never saw the pathological condition of; it was afterward seen by other persons. Another fracture is the fracture which occurs from a half to three-fourths of an inch above the wrist joint; and there is still another fracture, Robert Smith's fracture, an inch and a half above the wrist joint. The fractures are very commonly described or classified together, but anybody who will take the trouble to look at the anatomical construction of the parts, will readily see that there must be a very great difference in the treatment and in the results of that treatment. In the first place, you have a fracture involving the wrist joint, very often with rupture of the annular ligament, and consequently a fracture which, unless carefully reduced, must necessarily be followed by deformity. Now, that is not so likely to occur to the fractures three-fourths of an inch above the wrist joint, which do not involve the joint at all, although they may be attended by displacement. In Smith's fracture, an inch and a half above the joint, these conditions are not likely to be present, consequently in the cases which are treated as Colles' fracture, which are really Smith's fracture, the results must necessarily, with any kind of careful treatment, be good. With Colles' fracture, the results ought to be good, if carefully treated. With Barton's fracture, involving the joint with displacement of the ulna and comminution of the fragment, we have conditions which are likely to be followed by deformity, no matter

what method of treatment is used. Now, I have treated a few of these cases. When I have a fracture in the vicinity of the wrist joint, the first thing I do is to reduce the fracture if I can. If you have them there, it is not very difficult to retain them. The old practice initiated by Sayer, of the treatment of all fractures, consisted in extension and retention, no matter what apparatus you use, so that it accomplished the object. Professor Moore claims that he treats his cases simply by adjusting the fragment, by drawing the hand powerfully to the radial side and simply putting his light compress below, holding it in position by adhesive plaster, and I have no doubt he obtains good results. I think that in the treatment of this fracture a great deal depends upon where it is located, whether it involves the oint, or an inch and a half above the joint.

Dr. Kearns: There is nothing I can say to throw any light on the origin of my splint. To be brief, I should say this splint is the evolution of experience. I found that when I treated fractures of the fore-arm there would often be swellings for months afterward, interfering with the daily employment of the person. My desire to remedy this difficulty was the cause of my studying this matter. In presenting these splints to the New York City Hospital, they said that the principle I spoke of was the principle they had been trying for years, but failed to rightly employ. Take one of the arms not broken, put it in a straight splint, keep it there for three or four weeks, there will be a stiff, immovable arm. Now, again, another qualifying cause of this. The cases I had were nearly all hard working men, anxious to return to work as soon as possible. They could not appreciate fine spun theories, but did want quick relief, and if I could not give it, they were not backward about going to another physician. To meet their cases I devised the splint of which I speak, and have had good success in its use.—*N. E. Med. Journal.*

The Rationale of Influenza.

The following remarks by Dr. Laffont, Professor de Therapeutique a la Faculte de Medecine de Lille, will be read with interest: The epidemic which was such a cruel scourge last winter is again appearing, although up to the present in a milder form. It may, therefore, not be without use to consider at the present moment the most rational treatment of

this affection, at all times painful, and sometimes, from its complications, serious. This matter is, I consider, a contagious catarrhal affection, in its milder form known to us as "grippe," but from its recent serious epidemic character christened "influenza," a name it will probably retain henceforth. The symptoms of this complaint are manifested invariably by a functional depression, more or less marked, of the whole system, varying from simple lassitude, stuffiness of the nose and slight gastric obstruction, all premonitory symptoms of a large number of contagious diseases, and fortunately often constituting the only symptoms of the malady, which in such cases passes for ordinary "grippe."

In the late epidemic, to these promonitory symptoms succeeded all the characteristics of grave typhoid infection: nausea, fever, muscular pains, delirium, pneumonia, with tendency to suffocation and complete prostration. In the discussions at societies and in medical journals on its etiology, some described it as a simple catarrhal affection, more or less grave, having for cause the influence of the external conditions of the atmosphere, and denied its contagious character; others sought at once for the microbe. In the midst of these etiological discussions, no therapeutic law was propounded, and the medical journals were advocating here aperient medicine, antithermics; there, the Vin Mariani (made from the coca of Peru) and tonic medicines; elsewhere, counter-irritation and balsamics were said to do wonders; almost everywhere was admitted the specific effect of sulphate of quinine, or, still better, salts of quinine; above all, antipyrin. From my own experience, based upon a great number of cases and on myself in particular, I have no hesitation to assert that the method which succeeded the best was essentially eclectic. Thus, at its first appearance I was able to arrest the development of the disease by administering an aperient (*oleum ricini* by preference), then causing thoracic revulsion by rubefaction, or even vesication, and by provoking simultaneously a non-depressing diaphoresis, easily obtained by administering several times in the day a grog made from Vin Mariani, one-third wine and two-thirds water, very hot, with sugar, such as has been prescribed by the learned laryngologist Fauvel for hoarseness and loss of voice—a "frigore."

In the presence of influenza in the stage when the patient was completely depressed, very far from ordering antipyrin, which only augments the depression, I found it much more

effectual to administer strong tonics, such as generous wines, champagne, whiskey, rum, cognac, tonics physical and moral, such as the preparations of Coca Mariani, Vin and Elixir, at the same time causing revulsion, and administering repeated aperients. From this treatment I rapidly cured myself, and observed the same results in patients without that long and tedious convalescence due, I think, to the weakness caused by the use of antipyrin.

I advise, then, as a rational treatment for influenza and kindred affections: first, gentle purgatives; second, diaphoretics and revulsives; third, strong tonics.

LONDON, November 19, 1890.

—*The Med. Press and Circular.*

On the Influence of an Irritant Dietary on Albuminuria.

With the aim of studying the subject, Dr. Nisons Feldgun, of St. Petersburg, has carried out (*St. Petersburg Inaugural Dissertation*, 1890-91, No. 4, page 45) a course of clinical observations on eight male patients of from thirty-seven to fifty years of age, suffering from chronic interstitial parenchymatous nephritis. As representatives of irritant or acrid dietetic substances, black pepper (*piper nigrum*) and mustard were selected, the powder being given just after meals in gelatine capsules or wafers, in the daily dose of from 0.3 to 0.6 grammes, while mustard (from 1 to 5 grammes a day) was either swallowed in the same way, or taken with the dinner in the ordinary manner. The pepper period in individual cases lasted from nine to seventeen days, the total quantity of the condiment ingested oscillating between 1.8 and 10.2 grammes; the mustard experiments (always separated from the pepper ones by a certain free interval) continued from six to fourteen days, the total amount of the substance used varying from ten to 100 grammes. The total duration of the observations oscillated from twenty-three to fifty-seven days. The patient's dietary otherwise consisted of soup, milk, cutlets, roast beef, bread and tea with sugar, remaining (as all other conditions) identical through the whole experiment. The following are the main conclusions drawn by Dr. Feldgun from his instructive research: 1°. In cases of chronic Bright's disease, a more or less prolonged use of pepper or mustard, taken in the ordinary dietetic quantities, is followed by a distinct increase of albuminuria, both absolute and relative losses of albumen

being augmented. 2°. The unfavorable influence of the spices is manifested both in interstitial and parenchymatous forms of the renal disease. 3°. Simultaneously with aggravating albuminuria, the condiments markedly intensify drop-sical phenomena. 4°. Their effects on the secretion of urine, however, appear to be less definite. Pepper seems to occasionally increase the discharge, which, however, is not accompanied by any amelioration in the patient's condition. 5°. Neither pepper nor mustard produces any appreciable impression on the compensatory work of the heart. 6°. On the whole, the proposition is fully justified that the seasoning substances in question, as well as any other pungent constituents, are decidedly contraindicated in nephritic cases. More especially is this true in regard to a parenchymatous form, in cases of which even a few doses of pepper may give rise to a considerable and rapidly progressing aggravation of the patient's condition; the circumstance may be, probably, explained by the irritant principle being excreted through the kidneys in a more concentrated form (since the amount of urine in such patients is usually but scanty) and thus causing a correspondingly more intense local inflammatory irritation.—Valerius Idelson, in *St. Louis Med. and Surg. Journal*.

Translations.

Treatment of Epilepsy

By the Combined use of Bromides with an Organic Agent Capable of Producing Anæmia of the Nervous Centers: Calabar Bean, Picrotoxin, Belladonna and Sometimes Digitalis.

BY DR. V. POULET, DE PLANCHER-LES-MINES.

Translated for the CINCINNATI MEDICAL NEWS, from the *Bulletin General de Therapeutique*, Paris, March 15, 1891, by E. A. Quetin, Juge de Paix, Tonnerre, France.

Who has not too often met with cases of epilepsy refractory to the isolated action of bromides? Among small children especially, bromides, administered alone, are not generally very efficacious. Many epileptic adults are no less rebellious, in a certain measure, to the action of the bromide of potassium and to that of polybromides. Or, those inorganic salts are not well supported at the elevated dose they should be administered. In those various circumstances, the practitioner is in a great trouble. But then, instead of

being without resources, we may, with advantage, associate certain organic agents which help the action of the bromides, complete it and allow us to reduce the daily doses within the limits appropriate to every patient.

In the first rank of those organic agents we have the Calabar bean, or its active principle, the sulphate of eserine. Then come the picrotoxin, and belladonna or sulphate of atropia. Finally, digitalis will answer for some particular indications.

As a general rule, we have adopted the use of bromides in concurrence with one of the organic agents known as possessing incontestable antiepileptic properties. Indeed, science offers many observations in which the Calabar bean, or picrotoxin or belladonna, alone have broken the habit of epileptic attacks. But, in order to succeed, the malady should be treated from its beginning; and yet the success is very uncertain. On the other hand, bromides alone will frequently fail, at least partially. It is better therefore at the start to associate bromides with an organic substance, as thus the medication has a marvelous certainty of action.

It would not be prudent to administer at the same time two synergetic substances, such as belladonna and Calabar bean; a fatal result might ensue in convulsive asphyxy brought by the joint effects of the two spasmodic agents.

Thanks to the many resources that therapeutics borrow from the organic and the inorganic kingdoms, we shall meet with but few cases of essential epilepsy that will resist a well-directed mode of treatment.

We have to make a good choice of the remedy and to determine carefully the doses to be prescribed. These shall vary according to the age of the subject, his idiosyncrasy and the intensity of the affection. With adults we generally give five to six grammes of bromide of potassium to a woman, seven to eight to a man; with it, one centigramme of sulphate of eserine or one centigramme of picrotoxin, or one milligramme of sulphate of atropia. Instead of eserine we may indifferently prescribe two grammes tincture of Calabar bean or seventy-five centigrammes of the powder. Instead of sulphate of atropia, we may substitute two grammes tincture of belladonna or powder of the roots fifty centigrammes.

In the case of cardiac epilepsy, if digitalis is to be preferred, we give one to two grammes of tincture or twenty-five centigrammes of powder. In order not to fatigue the stomach, care is taken to give those diverse remedies at the be-

ginning or in the middle of the meals. With children, doses should be in proportion to the age. . . .

With every epileptic, there is a kind of annual critical period, in which the attacks reappear or are multiplied and intensified, almost fatally, whenever the disease is abandoned to itself. This recrudescence of accidents takes place generally toward spring-time; but with some subjects it comes also during winter or at the approach of the summer solstice. It is important to reckon with that critical period, and, in the conduct of the treatment, we must take care to prevent such a periodical aggravation, in augmenting, in good time and momentarily, the dose of bromides, according to the experience acquired with our patient.

From the *Bulletin General de Therapeutique*, Paris, February 28, 1891.

Hypodermic injections of corrosive sublimate in diphtheria and scarlatina (Morgagni, No. 11, 1890, an Italian publication), by Dr. J. Jacontini.—In a grave epidemic of scarlatina, the author had the idea of trying corrosive sublimate through hypodermic injections. He administered it in injections of one centigramme during eight or nine days. He noticed that the fever subsided rapidly, and at the same time the accidents in the throat were modified. Being encouraged by these results, M. Jacontini felt himself authorized to apply the same treatment in two cases of grave diphtheria, and he had the satisfaction of obtaining a prompt attenuation of the morbid phenomena, with a consecutive cure.

Infantile Hysteria of Convulsive Form.

BY DR. PAUL SOLLIER.

Translated from the French for the MEDICAL NEWS by Dr. H. Illowy.

It is only in the last ten years that special attention is being paid to the study of this disease in children, and that its special characteristics have been recognized—characteristics which, with but slight variation, are comparable to the manifestations witnessed in the adult. With the exception of Brignet, who had affirmed its existence in children, there are almost no definite cases on record except in the theses of Paris and Guirand, 1880; Cosanbon, 1880; Pengniez,

1885. Bourneville reports several cases, as also do Legrand du Saulle and Charcot. In Germany cases are reported by Schmidt, 1880; Lubymuller, Huoch, Schafer, Enninghaus. Jacobi has reported some cases. Clopatt, in an interesting memoir (1888), has collected all the known cases and reported six additional cases of his own. All these cases give a total of 272 observations, and only in eight of these was the hysteria developed before the sixth year.

The facts, therefore, bearing upon precocious development are still rare, and it is this which has induced us to publish the following observation, which possesses still other points of interest.

As *hereditary antecedents*, there are noted: Father, tuberculous; of feeble intelligence. Mother, mental debility. Paternal aunt, hysterical, with grand attacks. Two sisters died, one from meningitis, the other from Pott's disease.

Of *personal antecedents*, none could be discovered. No convulsions in infancy. No sickness up to the present day. The only thing noted is the physical over-exertion of the mother during her pregnancy.

Status praesens: Patient is a little girl of five and a half years, physically very well developed and very intelligent for her age. Her malady made its debut in December, 1889. She was frightened at a large mouse which crossed the room, and this fright produced a general trembling which lasted over an hour. The next day she presented a generalized emotional icterus of considerable intensity, which lasted for three days. From this time on her sleep, which formerly had been tranquil, was disturbed. The child would wake up with a sudden bound, a prey to nocturnal terrors. The appetite diminished, but there was no modification of character. In April (15), 1890, she had her first attack, and from this period till June, when I saw her, the attacks recurred with increased frequency and augmented duration. Almost every day she had two or three attacks, which lasted from two hours to two hours and a half. They recurred at fixed hours, especially at seven in the evening and at two in the afternoon. The child felt the attacks coming on and informed those around her of their approach. She had a sensation as if a ball had torn loose from the right side of her belly and came up into her throat—then redescended and came up again. She gave piercing cries and repeated the same words throughout the duration of the paroxysm. The four limbs and the neck

became stiff from time to time, then relaxing again she formed the arc of a circle. No grand clonic movements and no passionate attitudes. She jerks her head from right to left and throws it backward. No biting of the tongue, no involuntary micturition, no consecutive obliviousness, neither hebetude nor sleep after the attack. Sensibility to touch and to pain are diminished over the whole extent of the body; but manifestly more to the left. Light pharyngeal anæsthesia. She presents the peculiarity of the iris pointed out by fire (right iris deeper colored than the left). Owing to the youthfulness of the patient it is very difficult to get a correct idea as to the acuteness of the hearing and the extent of the field of vision. She has frequent attacks of headache, besides the present painful points, which are almost capable of calling forth the paroxysm, between the shoulders and in the ovarian region, pressure upon which latter determines a slight suffocation. Patellar reflexes exaggerated; plantar reflexes abolished, especially on the left side. She has been successively treated for meningitis, on account of her cries during the paroxysms; for Pott's disease and rheumatism, on account of the pain between her shoulder-blades. It is useless to say that placed in a family of but little intelligence, the anxiety which they manifested for the child in the intervals between the paroxysms, positively suggested them to her, and the great attention paid her during the attacks tended to prolong their duration, the little patient gradually having more and more attacks and of longer duration. After examining the child I advised what is always objected to in families, viz.: absolute isolation of the infant, which had become a sort of phenomenon in her family and in the neighborhood, and who understood this fully. Despite my advice they concluded to wait. But the frequently recurring attacks on the one hand and the general state of the child's health on the other, finally convinced the parents that their child was not suffering from a grave cerebral malady, with probably a fatal issue, as had been told them, and they decided to send her to the Rothschild Hospital at Berck. At the expiration of fifteen days the crises had disappeared, and a month later I learned that the child had returned home perfectly cured. As can be seen, the characteristics of grand hysteria were perfectly well marked. It is also well known that children, and especially little girls, present more frequently the convulsive than the non-convulsive form of hysteria.

Our little patient confirmed this assertion. Among the phenomena other than the paroxysms which she presented, the ovaralgia is of especial interest, occurring at an age when the ovary is but slightly developed and its function still in abeyance. The ovaritis was situated on the side opposite to the hæmi-anæsthesia, on the right, confirming what has been said (Pengniez), that it did not have the same predilection for the side on which the hæmi-anæsthesia prevailed, as in adults.

I think it well to remark that a case like this may embarrass the observer, if not forewarned. The pains in the head, the convulsive crises, led at first to the diagnosis of meningitis. Then, by reason of the hysterogenic points, she was treated alternately for Pott's disease and for rheumatism. At all these times a grave prognosis was made. Therefore the family would not separate themselves from the child, as I advised, and it was only when the continued excellent health of the child, despite the paroxysms, allayed their fears as to the ultimate issue, did they consent to do so. The treatment, moreover, very quickly confirmed the diagnosis and the prognosis as formulated by us. M. Charcot was the first to point out the really remarkable influence of isolation on the treatment of hysteria, and particularly in children. The sooner applied, the more quickly the attacks are suppressed. The case just reported is another example, and shows us that in place of waiting, as is unfortunately done so often, until the hysteria has taken firm root in the child, we should remove the child from the family as quickly as possible—a step which guarantees the rapid recovery of the patient.—*The Med. Car.*

TETANY IN INFANCY.—Dr. Escherrich, of Gratz, observed a veritable epidemic of benign tetany which affected infants exclusively, and it is well known that certain pædiatrists have denied the occurrence of this disease in the very young children. In the epidemic in question, the ages of the infants ranged from eight to twenty-four months. The infants were not rachitic, had neither digestive troubles nor other diseases of which the tetany could be considered a secondary manifestation. During the period of the duration of the disease, the existence of Trousseau's sign, the facial phenomenon, the exaggeration of the mechanical excitability of the muscles, and in two cases exaggeration of the electrical excitability of the nerves, were verified. In

one-half of the cases the characteristic contraction of the limbs was observed. In three-fourths of the cases there was present spasm of the larynx; two infants succumbed to these laryngeal accidents. In the other cases recovery ensued in about ten to nineteen days. At first there was cessation of the spontaneous contractions; then the sign of Trousseau disappeared; then the laryngeal spasms and the facial phenomenon; finally a return to normal mechanical excitability. As regards the treatment, recourse was had to phosphorated cod liver oil, which had but little effect. The bromides produced sedative effects. In the cases of imminent asphyxia from laryngo-spasm, tracheotomy, or intubation, was resorted to.—*Ibid.*

Proceedings of Societies.

Gynecological and Obstetrical Society of Baltimore, Maryland.

February Meeting—The President, Dr. Henry M. Wilson, in the Chair.

Reported for the CINCINNATI MEDICAL NEWS by Wm. S. Gardner, M.D.,
Secretary.

Dr. Neale reported the following case of occlusion of the os uteri during four days' parturition:

Mrs. K. W., æt. twenty-six years, white—I para. Past history unimportant. Last menstruation early part of April, 1890. Pregnancy normal up to November 16, 1890, when she slipped and fell violently on her right side on the sidewalk. There was no vaginal discharge at the time, and no discomfort except from the jar, bruising, etc., and the patient was up and about all the time. No movements of the child were felt after the fall. About Christmas, 1890, an offensive, yellowish vaginal (uterine) discharge occurred, and continued for one week.

On the night of January 12, 1891, her first labor pains began, and were so severe as to require morphine given by her attendant. There was no "show" or discharge of any kind. The pains increased, and the patient was suffering severely when I saw her for the first time Friday evening, January 16, 1891. She was a large, well-built and well-nourished woman. Could not distinctly map out the child by abdominal palpation; by auscultation gurgling over the

entire uterine tumor, and not a trace of foetal heart-sounds could be heard.

By vaginal examination—very short and small vagina; no cervix and no os! A continuous layer of mucous membrane, flush with the vaginal walls, closed over the entire vault of the vagina, and a little dimple in its center was the only indication of where the os ought to be.

Patient chloroformed, placed in position, hand passed into vagina, finger pressed firmly against the dimple, when it suddenly yielded or burst open like a membranous web, permitting a gush of *not* foul-smelling bloody water to escape, and at once the rapidly enlarging outlines of the os could be felt, then about as wide as a silver half-dollar piece. The soft, bagging scalp and loose cranial bones came down upon the enlarging os, and, as the expulsive efforts were almost *nil*, I grasped the head with a Simpson's cranioclast, which tore away, and then the blades of a Tarnier basiotribe were adjusted over the head and neck, and a thoroughly macerated, but not decomposed or foul small child, was easily extracted. Perineum intact; os fissured slightly. Small placenta expelled within six minutes. Considerable post-partum hemorrhage, uterus acting feebly. Os remained open about size of silver half-dollar piece, thick edges, uterus rather small, but not firmly retracted. Two quarts of a hot intra-uterine 1--4000 bichloride douche were injected. Patient rallied well, and, debarring an occasional slight rise of pulse and temperature and faintly foetid lochia, which readily yielded to the antiseptic douche, the puerperium was uneventful and recovery complete. This case was a novel one to me. I am quite sure the membrane I felt was mucous, and not the amniotic sac, nor do I think the case should be classed among those of cervical occlusion or stenosis from endotrachelitis.

Dr. J. Whitridge Williams read a paper on "The Induction of Premature Labor in Contracted Pelves." He pointed out that the comparative neglect of the operation in this country was due to two causes—the absence of large lying-in institutions and the consequent lack of large amounts of clinical material, and the almost total neglect of pelvic measurement.

By the term premature induction of labor, one understands the artificial interruption of pregnancy at such a period that a viable child may be born; that is, any period from the twenty-eighth or thirtieth week to the end of pregnancy.

Dr. W. then went into the history of the operation, and showed that it was first rationally employed for this indication in England, as the result of a conference of the eminent physicians of London in the year 1756.

Within fifty years it was quite generally employed on the Continent, and soon enjoyed a popularity which caused it to be resorted to on the most trifling pretexts, and which, in 1869, called forth Spiegelberg's forcible denunciation of the operation, by which he showed that the mortality, both of the mothers and children, was nearly three times greater after the operation than if the woman went on to term. This was soon followed by articles by Litzmann and Dohrn, who showed that Spiegelberg had painted the picture in colors far too dark.

Litzmann showed that in moderate degrees of contraction, 8.25-7.5 cm. ($3\frac{1}{4}$ -3, in.), the operation was indicated in the interests of the mother, as shown by a mortality of 7.4 per cent. after the operation, compared with one of 18.7 per cent. when the woman was allowed to go on to term.

Dohrn stated that the proper method of appreciating what the operation accomplished, was not to compare so many cases of induced labor with so many cases of labor at term, but to compare the results of premature and spontaneous labors in the same woman; by this method he found that twice as many children were saved by inducing labor as by allowing the woman to go on to term.

Consequently, they proved that the operation was indicated, in properly selected cases, both in the interests of the mother and child.

The introduction of antiseptic methods into midwifery almost completely robbed the operation of danger for the mother, as will be readily seen from the following statistics: Thus Haidlen reports forty-four cases from the Stuttgart clinic, with no maternal deaths, and seventy-two per cent. of the children saved.

In 1889, Korn stated that Leopold lost one woman in forty-five cases and saved sixty-six per cent. of the children, and last July Ahlfeld stated that he had induced labor 118 times, with the loss of only one mother, and had saved sixty-two per cent. of the children. At the Berlin Congress, Fehling stated that, in sixty cases, he had saved all the mothers, and eighty per cent. of the children.

From the above sketch, we will readily see that the maternal mortality in properly selected cases is very light: 401

cases collected by Korn showing a maternal mortality of only 2.9 per cent., or just a trifle more than normal labor in a normal pelvis, while the foetal mortality ranges from twenty to seventy per cent., the average being about $33\frac{1}{3}$ per cent. So, in this operation, we have a means of saving about two-thirds of the children without any risk to the mother. Or, reckoning by Dohrn's method, we save at least twice as many children as if we allowed the woman to go on to term, and then resorted to some conservative operation. These are the prospects of the operation, but, unfortunately, the degree of contraction within which the operation is justifiable is very limited, and one can only think of it in moderate degrees of contraction. According to Litzmann, in flattened pelves with a conjugata vera of 7.5-8.25 cm. (5-3.25 in.); and to Schroeder, 6.5-9.5 cm. (2.5-3.75 in.)

As pelves with a conjugata vera above $8\frac{1}{2}$ cm. ($3\frac{3}{8}$ in.) offer a reasonable chance to both child and mother at term, and those below seven cm. ($2\frac{3}{4}$ in.) offer no chance to the child, I think that the operation should be restricted to these limits; that is, between $7-8\frac{1}{2}$ cm. ($2\frac{3}{4}-3\frac{3}{8}$ in.) in simple flattened pelves.

In the juxto-minor pelvis a conjugata of $9\frac{1}{2}$ cm. ($3\frac{3}{4}$ in.) or less will usually be an indication for the operation. In the rare forms of obliquely narrowed pelvis, whatever its cause, we must be guided almost entirely by the history of previous labors.

We thus have the operation restricted to a very small range, $1\frac{1}{2}$ cm. ($\frac{5}{8}$ in.), which should only be exceeded when the previous history tells us that the previous labors have all ended disastrously. We should not think of inducing labor in a flattened pelvis with a conjugata below seven cm. ($2\frac{3}{4}$ in.), for in that case the prospects for the child are almost nil, and the danger to the mother greatly increased. Here we come to the relative indication for Cæsarian Section, when it is best to allow the woman to go on to term, and attempt to save both mother and child by that operation.

With these contracted indications we readily see that an accurate idea as to the exact size and form of the pelvis is an absolute prerequisite for the performance of the operation; and the only means by which we can accurately obtain this information is by carefully measuring the pelvis.

We should not content ourselves with simply measuring the conjugata vera, but should also take the external meas-

urements, and thereby attempt to determine with what form of pelvis we have to deal. After doing that, we must carefully examine the interior of the pelvis to determine its height; to see if it is generally contracted; and, if contracted, if the contraction increases as we approach the outlet, we must look for exostoses of the pelvic bones and carefully examine the promontory to see if it is double or not. If we think the pelvis contracted laterally, we should measure the distance between the tubera ischiorum on each side, as Breisky recommended. We should also attempt to estimate the transverse diameter of the pelvis, which is most difficult to do, and the most that can be expected is to examine alternately with each hand, and try to stroke the linea innominata, and so relatively to get some idea as to the transverse diameter.

Having decided that an operation is necessary, the next question is, When shall it be done? Of course, the younger the foetus the smaller will be its size, and, consequently, the easier its delivery. But, unfortunately, the smaller the foetus, the less chance will it have of living, even if it survive the operation. Generally speaking, we say a child is viable after the twenty-eighth week, but its chances of living are almost nil; indeed, children thirty to thirty-two weeks old have next to no chances of living. The later the operation, the more chance has the foetus of living after it; but, unfortunately, its size, and, consequently, the difficulty of its delivery, increase with its age. If possible, the operation should be done about the thirty-fourth to thirty-sixth week, our object being to operate at the latest possible period consistent with safe delivery.

To fulfill this object, we must attempt to gain an accurate knowledge as to the size of the child's head. Unfortunately, we are unable to determine its size with mathematical precision, or even with the relative precision of pelvinetry; so we are obliged to take advantage of every possible hint on the subject. Some of the following points may be of assistance in different cases: We must consider the mother's account as to the duration of the pregnancy. Notice the size of the parents, large parents usually having large children. Inquire about the previous labors, particularly as to the size of the head. Endeavor to estimate the size of the head by abdominal and combined abdominal and vaginal palpation; and note the consistency and amount of resistance to compression that the bones of the head offer. Try to measure

the head with the pelvimeter through the abdominal walls, and deduct the estimated thickness of the abdominal walls from the result. Notice the size of the large anterior fontanelle, average width, two cm.; the width of the sutures, and the distance from the anterior to the posterior fontanelle; for as they are larger or smaller, it indicates a larger or smaller head. Measure the length of the fœtus as it lies in utero, from breech to vertex; double the measurement and it gives, according to Ahlfeld, the length of the fœtus. If a foot is prolapsed, measure it, for Goenner stated that there is a difference of nearly one cm. between the length of the foot of a child at term and one at thirty-two to thirty-four weeks.

One of the most important methods is that of Mueller, who attempts to force the head down into the pelvis by pressure from above. As long as he is able to force the head down, he knows that labor will readily take place, but when he can no longer force the head down, and when it bulges out over the symphysis, then he considers that the time for operation has arrived. As the great danger to the mother is from sepsis, one can not be too careful in one's efforts to guard against it, and, consequently, one should be most particular in one's preparation for the operation.

For several days previous to operating, the woman should have a warm bath daily, and several times a day be douched with warm water, 95 to 98 Fahrenheit, containing salt or borax, by which the cervix is softened and dilated. Just before operating, the genitals should be most carefully washed with hot water and soap, followed by a 1-1,000 bichloride solution; the vagina should also be most carefully cleansed.

The hands of the operator should be washed for at least ten minutes in hot water and the nail-brush vigorously used, after which they should be placed for several minutes in a 1-5,000 bichloride solution.

All instruments should be sterilized by steam or placed in a five per cent. solution of carbolic acid for at least thirty minutes.

The most generally approved method is that of Krause, or the introduction of a disinfected flexible bougie between the membranes and the uterine wall. If properly conducted, it is almost entirely devoid of danger for the mother, and will bring about the birth of the child in a period varying

from eight to 214 hours, averaging about eighty hours, or about three days.

To insert the bougie, the woman is placed on her back or side, as may be most convenient, and the cervix brought down by a pair of bullet forceps, and the cervical canal carefully cleansed with bichloride on a pledget of cotton; the bougie is then carefully inserted, so that its lower end is within the vagina, care being taken not to wound the membranes or the placenta. Then the vagina is packed with iodoform gauze, care being taken not to wound the canal, which serves to hold the bougie in place. If at the end of twenty-four hours no labor pains have been produced, the bougie should be removed and another introduced at another point under the same precautions as the first.

If this method fail, we may resort to Kravisch's method of allowing a current of hot water, 100 to 110 Fahrenheit, to flow through the vagina several times a day for a period of five to fifteen minutes. Or we may puncture the membranes. As accessory to these, we may loosen the membranes about their lower pole, dampen the vagina with iodoform gauze, or employ Barne's bags.

If the pains are weak, Fehling recommends version by Hick's method, and bringing down one leg, whereby increased contraction is produced and one is afforded a ready means of ending the labor, if one deems it expedient in the interests of the mother or child.

Dr. Neale: I regard the chief point in this very able paper to be the endeavor to definitely fix the limits for the induction of premature labor in contracted pelvis; not as opposed to Cæsarian Section, but as applicable to a distinct and separate class of cases. This endeavor I strongly advocate, but, at the same time, must confess that I do not believe the plan is always practicable at the bedside. There are so many factors entering into the determination of this question, as I stated in my paper, that I can now only repeat what I there quoted, viz.: "A given pelvic measurement is useful as an indication of what has been the experience of others under similar circumstances, but is not a final ground for decision."

After the evidence adduced, which, doubtless, represents the opinion of the best medical authorities, I am sure I only voice the concurrence of this society in accepting the limits for this operation, as stated by Dr. Williams. This is prac-

tically in accordance with the teachings of Lusk—probably our strongest American authority—who places the range for the induction of premature labor in contracted pelves at a conjugata vera of from $2\frac{3}{4}$ inches (seven cm.) to $3\frac{1}{2}$ inches (8.75 cm.).

As stated in the paper, I believe the most reliable statistics of this operation are those of Dohrn, who compares the results of induction of premature labor with those of labor of term in the same case, showing a very decided advantage in premature labor. It must be remembered, however, as Litzmann has clearly shown, that children born alive by this operation are far more likely to die early than matured children. The risk to the child does not cease with the delivery.

I can not recall any reference in the paper to pelves contracted from hip-joint disease, and yet I have met with two obstetrical cases of this character during the past two years in this city. Both were in private practice, and both were prumparee.

The first case I saw in consultation during a very severe labor at term, and delivered her of a still-born child by a difficult high (Fornier) forceps operation.

Premature labor was induced on the second case at the eighth month. In this case the bougie was retained under antiseptic precautions (two p. e. creoline cervical and vaginal douche and iodoform gauze over os) between the membranes and uterine walls for forty-eight hours without effect. It was then withdrawn, the douche again administered and bougie reintroduced in a different position and retained to twenty-four hours again without effect. The sac was the punctured high up by the probe, and labor began in about fifteen hours. Thus we see the method of Krause, although the best, may fail, where puncture of the sac will not.

As this lady was poisoned to death by an unclean servant, who dressed and picked carious bone from her foot, and then attended my patient, and handled all her linen, napkins, etc., without my knowledge, it shows the importance of extending our antiseptic precautions to everything coming in personal contact with the case. As regards the method of delivery, the experiments of Budin and others speak strongly in favor of version and extraction as opposed to forceps.

Dr. Kelly: The subject is too large to be discussed formally. I will merely refer to one or two points of interest: A serious complaint is to be entered against the records of

foreigners in regard to the statistics of infant mortality after premature labor. Many observers only state whether the child was born living or dead; some few state whether or not it was living when discharged from the hospital. What we want to know for practical purposes is whether the children live any time after they get home. My own experience is but few live. If they are sent out simply to die soon after at home, the induction of premature labor among the poorer classes simply becomes a species of uterine gymnastics. A method of my own, which I have found most successful in inducing premature labor, is taking a flexible whalebone bougie, introducing it between the membranes and the uterine wall, high up into the uterus, and sweeping it gently around for one or two inches in either direction. This has not failed me in any instance in bringing on labor.

Microscopy.

The Centenary of the Microscope.

BY ERNESTO MANCINI.

Nuova Antologia, Rome, December.

It is generally thought that the invention of the microscope goes back to the close of the fifteenth century, or, to be more precise, to the year 1590, when, in the city of Middleburg, in Holland, two spectacle-makers, named Janssen, invented both the telescope and the microscope. This date for the invention, according to which its third centenary would arrive in 1890, does not rest on authentic documents, but is based on assertions published in 1665 by the physician, Peter Borel. He denied that Galileo, Drebbel and others deserved the credit of having invented the telescope; and in order to demonstrate that the invention of that instrument, as well as of the microscope, was due to the Janssens, produced some documents which showed that the two spectacle-makers, having invented the telescope in 1590, presented a specimen of it to Prince Maurice, Stadtholder of the Netherlands, and to the Archduke Albert. Later on, however, the telescope of Prince Maurice became a microscope, in a letter of William Borelli, who declared that he had always heard in Middleburg, his native city, that the

Janssens had invented these optical instruments, and further that, when he was ambassador at London, in 1619, he had seen in the hands of Drebbel the identical microscope that the Janssens had presented to Prince Maurice.

Professor Gavi, however, in a work which demonstrates the excellence of his judgment and his vast erudition, has collected a series of documents, which not only seem to restore the merit of the invention of the microscope to Galileo, but show the various vicissitudes of the discovery itself. The first hint of the transformation of the Holland telescope into a microscope is found in a little book published in 1610 by Wodderborn, a pupil of Galileo. Speaking of the wonderful qualities of the telescope, Wodderborn adds, in praise of Galileo, that "with the instrument could be perfectly distinguished the organs of motion and sensibility in the smallest animalcule," so that the particular formation of multiplied eyes in very small animals could be perceived. This new application of the telescope by himself Galileo did not deny, though he never directly affirmed it. In the National Library at Paris is preserved a letter by Canon Tarde, in which he speaks of visiting Galileo in Florence, in 1614, when the latter was sick in bed. Notwithstanding, to Tarde Galileo gave ample explanation of a microscope then in his possession.

Whether the invention of the simple microscope be due to Janssen or Galileo, to Drebbel is due the merit of having produced at Rome, in 1624, the compound microscope. The difference between the two hardly needs explanation. The simple microscope magnifies with a single lens, or with several lenses so close together that they act like a single lens. The compound microscope has two or more lenses, separated by a convenient distance from each other, and which act separately. In 1669, Eustachio Divini constructed a colossal microscope which magnified 140 times. A little after, Bonannus invented a horizontal microscope which magnified 300 times.

In the seventeenth century were laid the foundations of micrography, a science which, by the study of the minute anatomical elements and their functions, has made such great progress under the name of histology, and been such a fertile cause of important discoveries. With the microscope, Malpighi, by the minute examination of the tissues, confirmed the theories about them he had previously formed;

Leuwenhœck discovered the globules of the blood and the structure of the nervous fibers; and Swammerdam dissected insects, of the most minute organs of which he gave descriptions still considered perfect.

In the eighteenth century, observes Henocque, but few modifications were made in the microscope. To mention all the improvements made in the instrument during our century would be tedious. During the last forty years enormous advances have been made in science by the aid of the microscope, of which the usefulness has been greatly increased by the skill with which the matter to be examined is prepared, and by the aid of photography. Microphotography dates from 1840 only; but since that date it has had an uninterrupted series of noteworthy improvements.

Besides histology, created by the microscope, by which our acquaintance with the most hidden structure of organisms is constantly increasing, bacteriology, with its rapid succession of discoveries of the highest importance, owes its existence to the microscope. Those little beings, those micro-organisms, which, by the change of the medium in which their evolution is effected, can produce so much good or so much evil, and of which it takes several millions to occupy the tenth part of half an inch in space, can now be identified according to their species, notwithstanding their changeable aspect. We can estimate the rapidity of multiplication, the number, the dimensions, and the singular manner in which by dividing themselves, or by means of a sort of buds or spores, the micro-organisms reproduce themselves.

In the examination of the inorganic world the microscope has had results not less precious. The wonderful phenomena of crystallization, the exact form of the crystals, the more precise in proportion to their minuteness, the modifying properties of the light called forth by the thinnest layer of a mineral, the interior texture of rocks, all these can be studied with a precision impossible before the invention of the improved microscope. And, finally, not to mention all the triumphs achieved by the instrument, it has had an application which formerly would have seemed paradoxical, since the microscope has been employed to show the particulars of the nature of the surface of the planets, particulars which have been made clear by microscopic observations of instantaneous photographs.—*Literary Digest*.

Effect of Thunder-storms on Milk.

The effect of thunder-storms in turning milk sour is a matter of constant observation in every household. It is not certainly known to what element in the air this souring action on milk is to be directly attributed, and most people are content to ascribe it to "electricity in the air." An Italian savant, Professor G. Tolomei, has lately made some experiments with the view of elucidating this question. He found that the passage of an electric current directly through the milk not only did not hasten, but actually delayed, acidulation—milk so treated not becoming sour until from the sixth to the ninth day, whereas milk not so electrified became markedly acid on the third day. When, however, the surface of a quantity of milk was brought close under the two balls of a Holtz machine the milk soon became sour, and this effect he attributed to the ozone generated; for when the discharge was silent the milk soured with greater rapidity than when the discharge was explosive—in the former case more ozone being formed than in the latter. The souring of milk is generally attributed to the growth of a ferment (bacterium), which converts the milk sugar into lactic acid. It is possible, then, that the presence of ozone in the air overlying the milk hastens the growth and multiplication of the bacterium. The first observation, namely, the retardation of souring by the passage of a current through the milk, may be a point of practical importance to milk traders. Regarding this theory that milk becomes sour from the action of ozone, Dr. Henry McClure (*British Medical Journal*) contends that there must be some mistake. He writes: "One can hardly imagine that this gas, which undoubtedly possesses powerful oxidizing and antiseptic qualities, should be the factor in producing this result. The result may be admitted, but viewed in relation to the experiments of Professor Lodge, confirmed by myself, on the precipitation of smoke by the static spark, and stated in my book on 'Static Electricity in Medicine,' it is a fair inference that the atmospheric dust, together with organic germs, are thus precipitated during a thunder-storm, the precipitation of the latter causing the rapid souring of milk, the putrefaction of meat, etc.; and thus there seems a scientific basis for the popular belief that electrical storms clear the air."—*Druggists' Circular*.

Gleanings.

POPULAR FAITH IN ALTERATIVES.—Since the nature of the action of this class of remedies is, to some extent, as yet undetermined and obscure, they are necessarily prescribed empirically. To this fact is, perhaps, due the promiscuous use by the public, not infrequently with the endorsement of physicians, of a host of nostrums of no real medicinal value. Many of these have had an enormous sale—indicative not so much of their worth as of the general belief in the necessity for the use of what are popularly termed “blood purifiers.” Spring is the season when these are most generally resorted to.

When we consider that there is no condition of disease at some stage of which tonic alteratives are not indicated, it will be appreciated that next to agents such as opium and quinine, the action of which is specific, no class of remedies are more frequently demanded.

Messrs. Parke, Davis & Co. supply, under the name of Syrup Trifolium Compound, an alterative formula containing red clover, stillingia, cascara amarga, burdock root, poke root, prickly ash bark, berberis aquifolium, all valuable vegetable alteratives, either with or without potassium iodide. This has been used by physicians with much success in all conditions requiring alterative treatment.

TO REMOVE DARK COLOR FROM COMEDONES.—The *British Journal of Dermatology*, February, 1891, gives the following prescription of Unna and Leistokow for removing the unsightly “black-heads” which are so often an annoyance to a patient and a trouble to the physician.

℞.	Lanolin,	10 parts.
	Vaselin,	20 “
	Peroxide of hydrogen,	20-40 “

BORACIC ACID WITH MASSAGE IN DISEASES OF THE CONJUNCTIVA.—Dr. W. Beaumont recommends rubbing the conjunctiva with finely powdered boracic acid, in granular and follicular conjunctivitis. He everts the upper lid in the usual way, and sprinkling the exposed conjunctiva thickly with the powder, he rubs it into it for five or ten seconds with the end of the index finger. The acid then remaining may be washed away with a soft brush dipped into “lead lotion,” or, if there is not much discomfort, it is allowed to remain. The lower lid is then treated in the same way.

At first the applications are somewhat painful, but afterward less so. Pain may be prevented by using cocaine beforehand. The treatment may be repeated every day, or every two days. After two or three applications the conjunctiva presents a healthy reaction.—*Lancet*, Oct. 18th, 1890.

ON CORNEAL ULCERS WITH SPECIAL REFERENCE OF THEIR TREATMENT WITH THE GALVANO-CAUTERY. R. I. Magee.—The author, after describing six cases, arrives at the following conclusions :

1. The galvano-cautery is always indicated in those ulcers which take their origin in mycotic infection. In such cases it gives the most thorough disinfection of the floor and sides of the ulcer, and at the same time stimulates the process of repair.

2. Repair is shown almost at once after the application, in the clearing of the aqueous humor, more easily obtained dilatation of the pupil, absorption of the hypopion, and increased diffusion of the corneal tissue.

3. In most cases it does away with the necessity of the corneal (Saemisch) incision; because, when the evacuation of the anterior chamber is required, it can best be effected by means of the heated loop.

4. The operation causes but slight pain, and no assistant is necessary.

5. The healing process is considerably shortened, and the final result shows a much less extensive and dense opacity of the affected corneal tissue.

6. In one case it was employed in the early stage, but in four cases it was employed late in the disease, when destruction of the eye seemed certain, and with gratifying results.

7. The pain following the application of the galvano-cautery is less and of shorter duration than that of any other caustic.

8. The extent and limitation of the cauterization can be definitely measured; not so with any other caustic.

9. The mode of applying the heated galvano-cautery is exceedingly simple and easy to master.—*Kan. Med. Journal*, Nov., 1890.

TREATMENT OF TRACHOMA WITH THE BICHLORIDE OF MERCURY.—Drs. Gast and Otto Keining (*Deutsche Medizinische Wochenschrift*, Oct. 9th, 1890) advocate a method which they have found so efficient, that cases which have been under treatment by other means for long periods have been cured

in from two to six weeks, even when there has been extensive pannus. The eye is first thoroughly irrigated with corrosive sublimate, 1 to 3,000, and then the lids are everted and firmly rubbed with a hard pad soaked in the same solution. If the ocular conjunctiva is affected, it is treated in the same way, any bleeding from granulations being disregarded. The frictions employed are proportionate to the severity of the case. When the granulations are so firm that the frictions do not evacuate their contents, they are squeezed out by cilia forceps. The treatment is repeated daily. Some reaction follows, but this need not prevent a repetition of the process. There is always rather free secretion at first, but this disappears after the third to fifth day of treatment. To remove the secretion, the eyes are bathed, for an hour three times daily, in warm solution of the bichloride, 1 to 10,000, and the same plan employed when there is itching of the lids. If the lids swell considerably, the treatment is discontinued, and the lids are brushed with the milder solution. Sometimes membranes form on the conjunctiva; these should be allowed to come away spontaneously.—*Buff. Med. and Surg. Journal.*

LOCAL ANÆSTHESIA FOR SLIGHT OPERATIONS.—(*Lon. Med. Record*).—For operations upon small abscesses, opening fistulous tracts, or removing superficial growths, it is recommended that local anæsthesia be secured by a spray of the following solution:

R _y .—Chloroform,	10 parts
Sulphuric ether,	15 parts
Menthol,	1 part
M.	

The anæsthesia which is thus obtained lasts from two to ten minutes.

BACTERIOLOGY AND MODERN MIDWIFERY.—The time was when the birth of a child was thought a physiological process, during which nature was wholly sufficient, in the large majority, to care for the mother and her offspring. These were days when child-bearing women enjoyed good health, and pursued their usual employments up to the period of delivery. The lying-in period was not a condition of disease, and the getting up was at the ninth day, and without subsequent trouble.

Now we have reached the time when physicians believe in making much of and much out of the birth of the child. They want to make so much of it and so much out of it,

that child-bearing has become dangerous, and so expensive that men can not have large families without impoverishment. Under the new regime, ten or a dozen children in a family would be an impossibility without several mothers, and unless the husband had a long purse.

The matter has become more complicated since the bacteriological craze has struck the profession. True, they do not ask that germicides be used at the begetting, but that will come in time, and it may be that the doctor will insist on being there with his antiseptic washes, sponges, gauze and pads.—*Dr. A. J. Howe.*

TREATMENT OF ERYSIPELAS.—Dr. Koch treated numerous cases of erysipelas with the following ointment:

Ry. Creolin,	. . . . .	3 i.
Iodoform,	. . . . .	3 iii.
Lanolin,	. . . . .	3 i.

This ointment is spread as an even, smooth layer over the affected skin and its surroundings, on an area of at least two to three inches to the outside of the inflamed parts. The whole is covered by a piece of mackintosh. Dr. Koch selected creolin in the above prescription because he thought that it was possessed of first-class disinfectant properties, without sharing the dangerous after effects of carbolic acid. Iodine, which is derived from the decomposition of iodoform, stimulates absorption of inflammatory products. Lanolin has been chosen because it penetrates the skin best of all ointment bases.—*Amer. Prac. and News.*

THE MICROBES OF PNEUMONIA.—Dr. Queisner has examined the lungs of a number of children and adults dying from pneumonia, his results showing that the pneumonia coccus of Frankel and Weichselbaum is the usual cause of true bacterial croupous pneumonia. This coccus was also found in the majority of cases of broncho-pneumonia. In both children and grown-up people the sputum contained the coccus at the very commencement of the lung affection, and its existence appeared to form a very good sign of the invasion of pneumonia of one kind or another. In the lungs of ten children who had died of various forms of pneumonia, primary as well as secondary to measles, diphtheria and tuberculosis, Friedlander's pneumonia bacillus was not once found, but the coccus was found in eight cases. In several instances it was found impossible to distinguish the difference between the catarrhal and the croupous form, as even in

undoubted cases a very perceptible quantity of fibrinous exudation was found.—*Lancet*.

EPILEPSY AND HYSTERIA.—Dr. C. W. Townsend, of Bower Hill, Pa., says that he has used *Peacock's Bromides* extensively in epilepsy and hysteria. He treated two cases of epilepsy with them, of twelve and fifteen years' standing, with the result that no paroxysms, in either case, has returned in two years.

THE usefulness of good Hypophosphites in Pulmonary and Strumous affections is generally agreed upon by the Profession. We commend to the notice of our readers the advertisement in this number. "ROBINSON'S HYPOPHOSPHITES" is an elegant and uniformly active preparation; the presence in it of Quinine, Strychnine, Iron, etc., adding highly to its tonic value.

W. R. WARNER & Co. are evidently determined to keep in the van of therapeutic remedies, says the *Weekly Medical Review*. "Antalgic Saline" appeals to us to-day for recognition as a remedy for the relief of "headache," also for influenza and neuralgia, and as an antidote of "la grippe" they issue the "Pil. Chalybeate Compound":

Composition carb. protoxide of iron, . grs., $2\frac{1}{2}$.

Ext. nuc. vom., gr., $\frac{1}{8}$.

Sig.: One pill every four hours and increase to two pills three times a day.

Antalgic Saline, one dessertspoonful every four or five hours till relieved for headache. The same mode of administration precedes that of the chalybeate pills for "la grippe."

CAMPHO-PHENIQUE.—As day by day this valuable preparation grows in the knowledge of physicians and surgeons, so does it grow in their esteem. It has now testimonials of the highest character from those who have tried it, and is unquestionably one of the best surgical dressings ever offered to the profession. Dr. M. D. Hoge, of Richmond, Va., says that it effectually dissolves and checks the extension of the diphtheretic membrane, and is easily applied without dilution.—*Toledo Med. and Surg. Reporter*.

PEPPERMINT OIL IN SUPPURATIVE OTITIS.—In the *Meditzinskoie Obozrenie*, Dr. B. Pietkowski, of Radam, writes that the perusal of Dr. L. Braddon's paper has induced him to try peppermint oil, as a local antiseptic, in twenty-five cases

of chronic suppurative otitis media of from one to twelve years' standing. The experience has led him to the conclusion that, as far as the affection in question is concerned, the oil affords positively the best antiseptic dressing material of all yet known, since: 1°. It does not irritate the tympanic mucous membrane; 2°. it inhibits suppuration with a striking rapidity, which is partially dependent upon a high diffusibility of the oil; 3°. it is absolutely innocuous, even when employed in rather strong solutions; 4°. it is an excellent deodorizing agent; 5°. it is very pleasant for the patient. The author usually practices the following method. He begins with washing out the ear with a tepid five per cent. solution of sulphate of sodium, and afterwards thoroughly irrigates the cavity with the following mixture:

R. Solutionis olei menthæ piperitæ Ang-
licæ in alcohol. absoluto 5 per cent., 5 grs.
Aquæ (ab. 25° or 28° C.) . . . 500 grs.

M.

Then he carefully dries the meatus and plugs it with peppermint cotton wool which is prepared by treating Bruns's sterilized cotton wool with a 0.5 per cent. solution of peppermint oil in sulphuric ether. The procedure is repeated daily. Even in most inveterate and obstinate cases, otorrhœa greatly decreases, or ceases altogether, in from ten to fifteen days. After the cessation of the discharge the author passes to a dry dressing of the ear with powdered boracic acid, mixed with one per cent. of the oil.—*St. Louis Med. and Surg. Journal.*

Book Notices

DISEASES OF THE DIGESTIVE ORGANS IN INFANCY AND CHILDHOOD, WITH CHAPTERS ON THE INVESTIGATION OF DISEASE; THE DIET AND GENERAL MANAGEMENT OF CHILDREN, AND MASSAGE IN PEDIATRICS. By Louis Starr, M.D., late Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania; Physician to the Children's Hospital of Philadelphia, etc. Second Edition. Illustrated. 8vo. Pp. 396. Cloth. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price, \$2.25.

The author states that the clinical investigation of disease in children is easier, in some respects, than the same study

in adults. It is easier, he says, because in the child disease is commonly uncomplicated; rarely has its course and symptoms modified by tissue lesions, the result of previous affections, and never by vicious habits, such as the abuse of stimulants and narcotics, or by mental overwork and nerve strain. The confusing element of misstated subjective symptoms is also absent, while correct diagnosis is greatly aided by the facility with which physical examination of the whole body may be practiced. Diseases of the digestive organs constitute a large proportion of the ailments of children; and it has been the object of the author, in this work, to give prominence to these affections.

The young physician who sets out as a general practitioner—as the diseases of children will form a large part of the ailments he will be called upon to treat—should thoroughly study the peculiarities of children. He should understand the proper management of them—their feeding, bathing, clothing, sleep, exercise, etc. The therapeutics employed in treating the diseases of adults will not be found applicable in the affections of childhood. A great mortality would certainly follow if the disorders of those who are only a few years old were treated the same as of those who were of middle life, the doses only of the medicines exhibited being modified to suit the age. For the successful treatment of the diseases of the digestive organs in infancy and childhood, says the author, attention to the general regimen is quite as important as the administration of drugs, and it is upon the former that the student and young practitioner are usually the least thoroughly instructed. So much may be done by the selection of suitable food, by artificial digestion, by regulating the clothing, bathing and other elements of hygiene, that the author, without neglecting therapeutics, has given greater prominence to these points. “Fever,” says the author, “is always associated with an elevation of the temperature. Rapid and transient rises attend slight catarrhs and passing indigestions; prolonged rises, inflammatory and essential fevers. The *degree* of elevation marks the type of the pyrexia. This is moderate when the mercury stands at 102° , severe at 104° or 105° , and very grave at 107° . The *duration* of the elevation and the peculiar *range* of the oscillations—for there are oscillations in disease as well as in health—determine the nature of the fever. The febrile oscillations differ from the

healthy in that the lowest marking is noticed in the morning, the highest in the evening. *Variations* in the typical range of any given fever are important prognostic omens—a sudden fall of the temperature, together with improvement in the general symptoms, indicates the beginning of convalescence; a similar fall, with an increase of the general symptoms, is a precursor of death. When the morning temperature is equal to that of the preceding evening, there is great danger; if higher, greater danger still. Marked remission in continued fevers is generally a forerunner of convalescence.” Certainly the facts here stated form most valuable information for the young physician.

In preparing the present edition the author has endeavored to bring the general subject-matter thoroughly abreast with the times. He has made some rearrangement of the original text, and has added a quantity of new material. Medical students; young physicians and old practitioners will find much valuable information in the work. The chief additions consist of a section on urine alterations; a chapter on massage in pediatrics, and a detailed account of second dentition and its influence on health in late childhood.

PLAIN TALKS ON ELECTRICITY AND BATTERIES, WITH THERAPEUTIC INDEX. For General Practitioners and Students of Medicine. By Horatio R. Bigelow, M.D., Permanent Member of the American Medical Association; Fellow of the American Electro-Therapeutic Association; Member of the Philadelphia Electro-Therapeutic Society. 12mo. Pp. 85. Cloth. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price, \$1.00.

This little work tells all about electricity *as electricity*. It sets out with defining the technical expressions employed in treating of the phenomena of electricity, as electro-motive force, volts, Ohm's law, tension, dielectrics, ampere, galvanometer, etc. Other chapters describe the energy of the current, insulation, direct and indirect sparks, properties of the Franklinic interrupted current. Chapter IV. tells all about Faradic or induced currents, explaining the induction currents produced by currents, Apostoli's bi-polar uterine faradization, etc. It has been the intention of the author to give the general practitioner and student a plain, practical presentation of a difficult subject, and we think he

has succeeded. Ethical adornment and scientific discussions have been avoided. It will be found very useful by practitioners, as it will aid in understanding larger and more extensive works.

KOCH'S REMEDY IN RELATION SPECIALLY TO THROAT CONSUMPTION. By Lennox Browne, F. R. C. S. Ed., Senior Surgeon to the Central London Throat, Nose and Ear Hospital; Author of "The Throat and Nose, and Their Diseases," etc. Illustrated by Thirty-one Cases and by Fifty Original Engravings and Diagrams. 8vo. Pp. 114. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, \$1.50.

Forming a part of the title-page of this work is the following quotation: "So long as the only point of importance was to judge of the correctness of my statements, it was not essential to know what the remedy contains and what its origin is. On the contrary, it was clear that subsequent experiments would be all the more unprejudiced the less was known of the remedy itself."—*Prof. Robert Koch, January 15, 1891.*

The author states in his preface, and the statement is undoubtedly correct, that the unprecedented interest that has been awakened in the world at large by Prof. Koch's announcement that he had discovered a remedy for tuberculosis is easy to understand, but the fact that, although its nature is still a secret, his lymph has been accepted as worthy of experiment by members of the medical profession all over the globe, is due solely to his established reputation as the esteemed possessor of every high quality which is held to characterize the true scientist.

For some time the belief has been extending that all infectious diseases have their cause in germs—each one originating in a germ peculiar to it, which produces it and no other disease. It is consistent with this belief, consequently, that the means of cure, in these disorders, are remedies that will destroy the germs—germicides. When, some time ago, Prof. Koch announced the discovery of tubercular bacilli in cases of pulmonary consumption, it suggested itself to the mind of every one that, if they were the cause of the disease, as was declared by the discoverer, the proper and direct method to effect a cure would be to get rid of the bacilli. But as these micro-organisms are most tenacious of

life, it has seemed doubtful whether a germicide for their destruction would ever be discovered which, while destroying them, would not injure the person whose lungs were infiltrated with them.

The belief has been gaining ground that the tubercular bacilli found in the sputa and in the pulmonary tissues of persons affected with tuberculosis originate the disease and are not the result of it. Consequently, for some time before Koch announced the discovery of his lymph, the way was paved for its acceptance as a fact.

The author takes the ground—1. That a bacillus characteristic of tubercle is always present wherever the laryngeal appearances are of the nature which he has summarized. 2. That not only does tubercle play a primary part in the production of laryngeal phthisis, but that certain peculiarities which are positively pathognomonic almost invariably exist in each case. 3. That although comparatively very rare, there is such a condition as a *primary* laryngeal tuberculosis, and that, for all purposes of study, it may be so considered.

He advances a corollary to the proposition of Virchow, and urges that *not only is the larynx the most appropriate place for the study of true tubercle, but that it is also the most appropriate and convenient site for accurate observation of the various stages of its development towards separation, which takes place under Koch's treatment.*

On page 6, the author says: "Reverting now to the cause of laryngeal tuberculosis under the influence of Koch's treatment, I shall endeavor to show, step by step, that every stage in the life-history of the disease, which may extend over *many months, or even years*, can be developed, and, under Koch's treatment, be compressed into a space of a *few days, or, at most, of weeks*; and not only so, but that separation of ulcers and necroses, which hitherto has been so rare as to be considered by many as almost fortuitous, may take place under the influence of this magical fluid with a rapidity which is nothing less than amazing, and afford a series of pictures with actually visible and appreciable changes from day to day."

The composition of Koch's lymph is still a secret, and will continue to be a secret until the German Government gives him permission to publish it. The position which it holds in the estimation of the medical profession is unsettled, and will no doubt continue to be unsettled for some time.

Though a hundred years have elapsed since the discovery of vaccination for the prevention of small-pox, there are still a few who profess not to believe in it. But in the course of months, or a year or two, no doubt Koch's lymph will receive a position as an established remedy, though it may fall considerably short of being accorded as high a level as its discoverer and his friends are now claiming for it. That its discovery marks a great advance in medicine, we have not the slightest doubt, and we believe that it is the forerunner of still greater advances.

The work of Mr. Lennox Browne will be read with interest by all physicians, as it presents the fullest information in regard to Koch's cure. In an appendix is printed in full Koch's last paper on the treatment of tuberculosis by his lymph.

Editorial.

A NEW PUBLICATION.—P. Blakiston, Son & Co., of Philadelphia, announce the publication soon of "A Handbook of Local Therapeutics," being a practical description of all those agents used in the local treatment of disease, such as ointments, plasters, powders, lotions, inhalations, suppositories, bougies, tampons, etc., and the proper methods of preparing and applying them.

The diseases which chiefly require local treatment are those of the respiratory passages, ear, eye, skin, together with certain general surgical affections, including the diseases of women. Several gentlemen will assume the authorship, as Harrison Allen, M.D., of Pennsylvania University; Geo. C. Harlan, M.D., of the Philadelphia Polyclinic; Chas. B. Penrose, M.D., of the German Hospital, and Arthur Van Harlingen, of the Philadelphia Polyclinic and late of Jefferson Medical College.

Each remedy will be taken up in alphabetical order, and after a succinct description of their pharmaceutical properties, by Dr. Geo. G. McKelway, will be considered with reference to the local treatment of the affections as outlined above. The authors believe that the information contained in this work will not be found elsewhere. The volume will contain about four hundred pages. The price no doubt will be very reasonable.

AMERICAN ACADEMY OF MEDICINE.—The sixteenth annual meeting of the American Academy of Medicine will be held in Washington, D.C., on Saturday, May 2d, and Monday, May 4th. The session will begin at 3 P.M. on Saturday, and the annual collection will take place on Monday evening. It is hoped that every fellow proposing to attend the sessions of the American Medical Association will arrange to come to this meeting. The full programme will be sent a little later.

INFANT FEEDING.—We have received an interesting paper on "Infant Feeding," from Dr. Earle, of Chicago. It is worthy the study of every physician whose practice includes treating the diseases of infants and children.

Dr. Earle says that he agrees with the statement of some of the old authors that "Nature does not afford, nor can art supply, a substitute for mother's milk." He thinks that medical men should exert their influence to have mothers, unless some contra-indication exists, nurse their babies. The dangers should be explained which children must pass through, particularly during the summer; and the probabilities should be stated that a certain number of them can not survive upon any artificial food which may be devised or suggested.

So firm is his belief that no artificial food can be selected which will furnish a proper nutriment through the hot months to a considerable number of infants whose mothers can not or will not nurse them, that he is every year coming to suggest, with greater frequency, a wet-nurse. He knows full well that while many of them are conscientious, and do everything possible to nourish the little charges placed in their care, others are totally irresponsible and corrupt in the extreme. If from any cause the mother can not nurse her baby, and from certain other causes a wet-nurse can not be provided, then, of course, either an entire or partial artificial diet must be provided. A *mixed diet*, he thinks, is preferable to an artificial one; that is, part mother's or nurse's diet, with the remainder supplies from some outside source. A little mother's milk for a sick day or while a tooth is erupting, is most valuable. He has attended upon infants born between the sixth and seventh month, in cases of which an artificial food had to be provided, and with which he has saved their lives. Cream was the basis, barley-water the

menstruum, to which was added a little salt, a little sugar of milk and a small amount of lime-water.

"A prematurely born baby should be fed a small quantity frequently. Sometimes not more than a half teaspoonful, and when not fed from the spoon let an ordinary ounce bottle be provided with a rubber mouth-piece. I have no use for the large nursing-bottle provided with glass and rubber tubings and brushes. I regard them, with all their appliances, particularly for a prematurely born child, a fraud and a snare. For the first few days, perhaps, cracker-water, with a small amount of sugar of milk, is all that is necessary. Then cream added to a little cracker-water, or cream and rice-water; then cream and barley-water, and if vomiting takes place, a small amount of lime-water should be added. If from any reason the cream does not agree with the baby, condensed milk with barley-water, a little salt, and possibly the addition of a little lime-water. By varying the amount of cream, using either barley-water or rice-water as the diluent, adding a little sugar of milk and a little grain of salt, and sometimes a little condensed milk, when from any cause the cream disagrees with the infant, one is able to carry along one of these puny children until such time as the milk secretion is established."

As regards the various artificial foods for infants, Dr. Earle considers that some have excellent qualities, fulfilling, in many cases, the purposes of nutrition, while not a few are worthless and sometimes harmful. Liebig's food, he says, is composed largely of barley, malt, wheat flour and starch. He is of the opinion that it will not nourish a child sufficient without the addition of cow's milk. He has carefully examined the process of the manufacturing of Carnrick's food, and believes that the greatest care is exercised in gathering the milk, and the attempt is made to insure absolute purity.

We have been informed, and have reason to believe that the statement is true, that the dairies from which the milk comes, used in Carnrick's food, are under strict regulations. So soon as the milk is received it is drawn into digesting-tanks and brought to a temperature of 115° to 120° and treated with freshly made extract of pig's pancreas. It is afterwards raised to a temperature of 210° , to entirely destroy any pancreatic ferments. It is then evaporated to the consistency of condensed milk, combined with dextrine and milk sugar; then evaporation continued and powdered and

bolted. It is composed of forty-five per cent. of powdered milk, forty-five per cent. of dextrine and ten per cent. of milk sugar. Dextrine is used in the place of maltose for the reason that it is not fermentable until changed into sugar. When the process of digestion is under way, abnormal fermentation is not liable to occur.

"Personally," says Dr. Earle, "Carnrick's food has agreed with children in my practice, and has certainly 'bridged over' some who have not been able to take any other food." He suggests, however, adding some cream for the purpose of supplying fat.

DIFFERENCES IN VIEWS OF GYNECOLOGISTS.—We are not a specialist in gynecology, and, therefore, we do not know precisely to what extent gynecologists differ in their views in regard to many subjects involving their specialty. Certainly those of this country do not differ among themselves to the extent that those of the British Islands do. It is really melancholy the acute divisions that prevail in the British gynecological world. They form a subject of anxiety and regret to the rest of the profession of England, Ireland and Scotland. Is there such a division among the gynecologists of the United States? We think not, or we certainly should have heard of it. As regards the differences among themselves in the views of the gynecologists of the country which the Empress of India has immediately under her rule, a number of the *Lancet*, of March last, expresses itself as follows: "Such a rent as we now see in the gynecological branch of medicine—or shall we say surgery?—seems to us schism in the worst form in which it can affect or afflict a profession." And as regards schism it says: "Schism is schism, whether in the church or in science; and, if anything, it is more unseemly and unpardonable in the region of science than elsewhere." Does schism prevail among American gynecologists? If it does, we have not been informed of the fact. When we have attended any of their associations, the members seemed to be as loving toward one another as "sucking doves"—too affectionate for there possibly to be existing any unfortunate differences in views on professional subjects. Here are some of the differences in the views of British gynecologists: One authority says it is quite easy to remove an ovary; another not so. One says serious disease of the appendages is attended with menorrhagia, another with amenorrhea. One

sees danger in flushing the peritoneum, another does it almost daily. One says that drainage should be abolished, another that it is most valuable. More than this, as the *Lancet* says, "the teaching of experts as to errors in the organs of reproduction has undergone a wholesome change within a very few years, and the incidence of blame has been transferred largely from the uterus to its appendages. There is yet no guarantee that we shall not have other equally great changes announced. Our point here is this: if there be all this difference of practice, as we know there is difference of diagnosis and prognosis among gynecologists themselves, what slight control can the general practitioner have over the fate of a patient supposed to be affected with disease of the appendages? In most cases his opinion as a man of large experience will enable him powerfully to guide his patient. Here the sufferer is much more dependent upon expert opinion. For all these reasons it is much more important that those who devote themselves to this branch of the healing art should be controlled by the strictest ethical traditions of the profession. They should be extremely reluctant to remove parts which they can not restore, or to act without giving most respectful and careful consideration to the opinion of those who hold different views from theirs, either as to the possibilities of medical cure, or the right of the profession to remove organs whose function is only less precious than life itself, and in the absence of which the whole outlook of life is changed. We hold, therefore, that it is the duty of experts themselves, and of their colleagues, to surround these operations with precautions and hindrances over and above those of other operations. The exact nature of these need not be defined, but they should include due consultations concerning any projected operation, a full statement of the history of the case and the diagnosis of each case before operation, an exhaustive pathological report by the pathologist of the particular hospital of every specimen removed, and an equally careful report of the progress of the case immediately afterward, and for as long a time as it can possibly be traced."

A STANDARD DICTIONARY OF THE ENGLISH LANGUAGE.—We are in receipt of advanced pages of a new *Standard Dictionary of the English Language* in process of publication by Funk & Wagnalls, of New York. A glance through these pages shows that, beyond a doubt, the work will be

superior to any publication of its kind that has ever been issued, as Webster's International, Worcester's, the Century, Stormouth's, Smart's, etc.

We have only space to present to notice a few of the important points in which this dictionary will differ from others, and which will render it more desirable. 1. The "locating" of the verifying quotations; that is, the giving in each instance not only the name of the author, but also the name of the book and the number of the page where the quotation can be found. 2. The use, in the pronunciation of words, of the Scientific Alphabet, adopted by the American Philological Association. 3. The placing of the etymology *after* the definition. 4. The placing of the most important current definition *first*, and the obsolescent and obsolete meanings last; that is, the substitution of the order of *usage* for the historic order usually followed in dictionaries. 5. The giving of 50,000 vocabulary words more than are to be found in any other single-volume dictionary in England or America.

Various gentlemen distinguished for learning, with assistants, will have charge of the various departments. For instance, F. A. March, LL.D., L.H.D., of Lafayette College, will have charge of Spelling and Pronunciation; Rob't Ogden Doremus, M.D., LL.D., of Bellevue Hospital Medical College, Chemistry; Simeon Newcomb, LL.D., of Washington, Astronomy, Mathematics and Physics; Theodore Gill, M.D., Ph.D., of Columbian University, Zoology; James A. Harrison, LL.D., General History, Grammar and Rhetoric, etc. The Rev. I. K. Funk, D.D., is the General Editor; the editors of the various departments number from seventy-five to a hundred or more.

The Standard Dictionary will contain over 2,100 pages, each page slightly larger than a page of the latest unabridged Webster or Worcester. The paper and binding will be equal to that in those dictionaries, and it will contain over four thousand illustrations. These will appear in the pages *with the words* they illustrate.

The list price of the dictionary when issued will be \$10, but persons subscribing for the dictionary *now*, and making a payment of \$1, will be charged only \$6. This affords a splendid opportunity to obtain the best English dictionary ever published (best in every point that goes to make up a first-class dictionary) at a less price than was ever charged for a large unabridged lexicon.

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Original Contributions.

Antimony and Mercury in Scrofulous Affections.

BY J. A. THACKER, M.D.

If practitioners of the present day will take the trouble to look over some of the medical works of fifty and a hundred years ago, they will find virtues ascribed to remedies that they are not supposed to possess by physicians of to-day. I have no doubt but that there are many medicines on the shelves of our apothecaries that might be employed with great advantage in many affections on account of properties they possess, which doctors have forgotten they have, or, may be, never knew belonged to them.

On looking over, recently, some *ancient* treatises that we have, we found a little work entitled "A Treatise on the Scrofulous Disease. By C. G. Hufeland, Physician to the King of Prussia, etc. Translated from the French of M. Bousquet, by Charles D. Meigs, M.D., Mem. Am. Phil. Soc." We presume that Dr. Meigs, not understanding German, used a French translation in order to render the treatise into English. The work is dedicated by Dr. Meigs to Dr. Franklin Bache, who was one of the authors of the United States Dispensatory.

Before I quote what the author says in regard to the virtues of antimony and mercury in scrofulous diseases, it will be interesting to give his opinion in regard to the properties of several other medicines in the same affections. He speaks very highly of aloes. He states that, besides its efficacy in resolving lymphatic tumors and expelling intestinal worms, it strengthens the viscera of the lower belly. He thinks there is no substitute for this medicine. He says he has promptly cured with it anorexia, chronic vomitings, flatulent affections, etc., against which quassia and bark had been uselessly employed. It is particularly adapted, he

thinks, to the second stage of scrofula, when it is accompanied with general debility or a state of languor and *em-patement* of the abdominal organs. It is doubly indicated when there are worms, but must be carefully prescribed in all cases of inflammatory irritation or nervous erethism. He prescribes it in small does with aperient substances, such as bitter extracts and aperient salts.

He reports the following case: "A little girl aged eight years, evidently of scrofulous constitution, had had her abdomen swelled for a long time; the digestion was difficult, the skin of a bad color; she had swelled glands and frequent cough. These symptoms suddenly became exasperated, slow fever came on, the cough became more troublesome, the strength diminished, and to crown the evil she was attacked with vomiting, which returned several times every day, and threatened to exhaust the pittance of energy that was still possessed by the poor little patient. Suspecting that there might be worms in the alimentary canal, I added anthelmintics to the antiscrofulous remedies, and a few worms were expelled; but this produced no change in the disease. As both the vomiting and other symptoms of scrofula continued, I ordered for her the following mixture:

"R _y .—Visceral mixture of Klein,	3ss
Aperient mixture of Claudius* }	
Darel's aperient tinct. rhubarb }	3iij
Huxham's antimonial wine,	3ij
Extract of cicuta }	
Extract of dulc-amara }	aa 3i
Essence of orange peel,	3j ss

M. Sig.—Sixty drops four times a day in an infusion of dandelion, yarrow, saponaria and bitter sweet."

In six days, under this treatment, the vomiting had ceased, the appetite had returned, and the whole body was less clammy. Continuing the treatment, in two weeks more the cough, which exactly resembled that of phthisis, was gone, the oppression had disappeared, the slow fever had vanished, her strength and gaiety were restored. In one word, the patient might be considered as cured. The convalescence progressed under the influence of tonics, and all the appearances of scrofulous diathesis were dissipated. It should

*Hufeland says that he can not too greatly praise the Aperient Elix. of Claudius in the treatment of scrofulous patients. He gives the following formula for it: Take one ounce of carb. potass., dissolve it in eighteen ounces of water; add aloes, myrrh, resin of quaiacum, rhubarb root, of each half an ounce; saffron, two drachms. Make an elixir.

be observed that the mixture above mentioned does not act as a purgative.

MERCURY.—“Whatever changes time may produce in the theory of scrofula,” says Hufeland, “mercury will never be struck out of its list of therapeutical agents. It is, in fact, one of the most efficacious and oldest of the remedies employed in the treatment of the disease. Besides, it is doubtless more natural that theory should conform to practice than practice to theory. In vain did Mr. Girtanner, whose merit by the way we fully admit, attempt to call this truth in question by pointing out to us that medicines which irritate the lymphatic system are unsuitable for the treatment of an affection in which that system is already too much irritated. If we reason in this way, we ought to reject mercurials from the treatment of the venereal disease, an affection in which the lymphatic system is more irritated than even in scrofula; moreover, do we not know that one irritation may destroy another? Be this as it may, observation has proved the efficacy of mercury in the treatment of the scrofulous diathesis. If I may depend on my own experience, I may affirm that there is no means comparable to the one in question for promptness in removing scrofulous symptoms, especially swellings, eruptions, ulcers, ophthalmia, etc. I have seen them yield in a few days to the internal use of this metal.”

Hufeland explains the *modus operandi* of the effects of mercury, as follows:

1. It excites a *specific* irritation in the lymphatics, which neutralizes the scrofulous irritation, by means of a general law of the economy by which different modes of irritation affecting it mutually destroy each other.

2. It augments the resorption and secretion of the glands, as is proven by the resolution of scrofulous tumors and by salivation.

3. It corrects the acrimony of the lymph by a semi-chemical action, to which doubtless is owing the property, which mercury seems to possess, of neutralizing most of the various sorts of virus that are developed in the human body; such as those of syphilis, smallpox and hydrophobia.

As regards its indications, the author says that mercury may be given with advantage in all the forms of scrofulous disease, but principally in cutaneous eruptions, engorgements, lymphatic infiltrations, chronic phlegmasias, and more particularly still in the ophthalmias and nervous affections dependent on the scrofulous taint. But too much care

can not be used in those individuals who, by the very structure of their bodies, appear to be disposed to phthisis, in those who are threatened with scurvy, as well as in all cases of weakness of the alimentary canal, and in all individuals subject to abundant hemorrhages. It should never be given in the last stages of scrofula, especially if a slow fever has already made its appearance.

When mercury is given it should not be carried to the extent of producing salivation. While it is the remedy *par excellence* in syphilis, as is conceded by specialists the world over up to the present year, 1891, yet no one considers that it is ever necessary, in order to effect a cure, that its characteristic effects be caused. In fact, we believe that salivation occurring, while administering mercury, its specific effects in syphilis are hindered; and so we can understand, as stated by Hufeland, that injury instead of benefit will be the result of its action in a scrofulous affection when its administration has been so excessive as to cause ptyalism. So with veratrum viride, we showed in an article recently published in the MEDICAL NEWS, that it is not necessary to bring about its poisonous symptoms in order to bring the pulse under control.

Hufeland states that it can not be denied that mercury, when its use is long continued, produces a radical debility, which affects the fluids no less than the solids; and hence the propriety of associating with it tonics, such as bark, iron, etc., and also of prescribing a nourishing diet. It not unfrequently happens, he continues, that the scrofulous diathesis, like syphilis, remains apparently stationary, or that it even becomes aggravated under the influence of mercury, "a circumstance that depends on the bad state of the vital forces." Under such circumstances he recommends to "suspend the use of it for a time, treating the patient with tonics and having him placed upon a nutritious but easily digested diet." Thus the general tone of the constitution previously weakened by mercury will be re-established, and the animal fiber elevated to the degree of energy requisite to enable the system to triumph over the enemy which had besieged it.

It is often necessary, Hufeland states, to combine mercury with narcotics while treating cases of scrofula. This is not for the purpose merely of restraining the purgative effects which may now and then occur with some persons, but to subdue the excessive sensibility manifested by some individuals while taking mercurial preparations. The narcotics

he recommends are opium, cicuta, hyoscyamus, belladonna, assafetida, etc.

The external is often to be preferred to the internal use of mercury, especially in such local affections as are found to be very obstinate, and when great care is required in relation to the alimentary canal and the rest of the constitution.

That mercury may be employed in affections, without detriment, in which it is presumed that the vital forces are at a low ebb, and in which it is generally believed that the strength of the patient must be husbanded, I will mention in the way of evidence that, in a medical journal of last month, March, 1891, there appeared an article in which the writer announced that he had employed mercury in frequent doses—say from half a grain to a grain every two hours—with remarkably successful results in dissolving away or getting rid of the exudations in the throat and pharynx of patients suffering with diphtheria, also in cases of membranous croup. But mercury was found to be especially efficient in preventing the formation of the exudations mentioned.

Hufeland often combined mercury with sulphur. The latter, he says, favors a determination to the surface and hinders salivation. “A little girl, five years old, was affected with a complete mesenteric atrophy and scrofulous ophthalmia. She took every evening a powder composed of one grain of calomel and twelve grains of flowers of sulphur and sugar; her drink was a decoction of quaiacum and bark, and she had occasionally a purgative. In three weeks there was not a trace of either ophthalmia or marasmus.

ANTIMONY.—Antimony, says Hufeland, irritates in a peculiar manner the stomach and bowels, as well as the lymphatic and glandular systems; and it is more owing to the specific nature of its action than to its intenseness, that it is able to facilitate the resolution of engorgements, and re-establish and correct the secretions by restoring the secretory organs to a natural state. To produce these effects, he continues, it is not necessary that the antimony should excite the sensible appearances of reaction; experience has proved that the effects are the same when it is given in very small doses, and to individuals whose stomachs are very little irritable.

Hufeland formulates the following in regard to the action of antimony in scrofula:

1. Antimony fulfills all the indications exhibited in scrofula except that of restoring to the constitution the tone it has

lost. It destroys the irritation of the lymphatic system, resolves engorgements, corrects faults of the secretions, favors the reabsorption of effused fluids, etc.; in a word, it is one of the most powerful resources of therapeutics against the scrofulous diathesis. The physicians of to-day do not believe these assertions of Hufeland, who combat scrofula with cod liver oil, iron, quinine; etc.

2. But it is never more efficacious and precious than when the skin does not perform its functions properly, or when there exists a morbid secretion, as, for example, in cutaneous eruptions and ulcers. There should always be good reason, before prescribing it, that there are existing no contra-indications, and heed should also be given to the complications and to the period of the disease.

3. The only inconvenience that can be charged upon this metal is, that its long continued use weakens the general tone of the constitution, and particularly that of the skin and bowels; whence it might prove injurious to weakly persons, and in cases of colliquative sweats; but it is easy to prevent this inconvenience by selecting a preparation that does not determine so much to the skin, and by combining it with vegetable tonics, and by administering tonic baths.

4. Antimonial wine and the antimonial salts are among the efficacious and energetic preparations of this metal, but there is none in which the long continued use is not followed by greater relaxation—therefore they should be combined with tonics. Hufeland says that he could cite several instances in which a simple solution of tartarized antimony in a tonic preparation sufficed for the cure of scrofula and even incipient rachitis.

In obstinate herpetic eruptions dependent upon the scrofulous vice, antimony in substance is so efficacious that Hufeland says he has cured the most obstinate eruptions, which had not only refused to yield to ordinary means, but also to the most energetic preparations of antimony. In the way of proof he reports a case which we regard as rather remarkable:

“A little girl born of scrofulous parents had presented in her infancy the unequivocal symptoms of the scrofulous diathesis; she still had swelled glands on her neck, and eruptions on the arms and face. The eruption was dry, scaly, and sometimes resembled tinea. A great variety of means, both internal and external, had already been made use of without any success. I first prescribed a mixture of

Plummer's powder, bitter sweet and mezereon, but I was not more successful than the physicians who preceded me; however, I was not disheartened. I ordered antimony in substance, in doses of one scruple, three times a day, with an absorbent powder, and a little sugar and canella. This dose I gradually augmented, until the patient took half an ounce of antimony every day; her drink was a decoction of bitter sweet, and for external application some sulphurous baths. This treatment was soon followed by a favorable change, and the cure was completed in about six weeks; however, it is right to say, that she has had some slight relapses since, but they have promptly yielded to the same means."

Kyphosis as Caused by Fracture.

BY R. S. KELSO, M.D., JOPLIN, MO.

Read before the Missouri State Medical Association.

The term kyphosis is from a Greek word signifying gibbous; it originally had reference rather to the deformity than to the disease producing it; it is now, however, used to designate a disease of the spinal column characterized by caries of one or more of the vertebral bodies with the attendant changes leading to deformity.

This disease has also been designated by other terms, as antero-posterior curvature, spondylitis, malum Pottii, Pott's disease, angular curvature, etc., and some one, fond of Greek roots, has discovered that its nature and chief characteristics are admirably expressed by the word spondylarthrocace.

The deformity from this disease was known and well described at least 3,000 years ago, and has given use to many legends of "hunchbacks," to whom were generally attributed great mental as well as physical deformities. Hippocrates describes it, and states that it is caused by tuberculosis within and without the lungs.

Something over a hundred years ago, Percival Pott, an eminent English surgeon, by whose name the disease is commonly called, wrote an exhaustive treatise on it, in which he held that caries of the spine was the invariable cause. Delpech, who wrote many years later, substantially agrees with him, but taught that the caries was caused by tuberculosis or scrofula. He claimed that the tuberculous matter is de-

posited within the cancelous tissue of the bodies of the vertebræ, absorbing and weakening this structure to such a degree that it is unable to sustain the superincumbent weight, when it crushes, giving rise suddenly or gradually to posterior curvature. Other authors followed with nearly the same views, and all agreed that the disease has its origin in tuberculous deposit, followed by softening and caries of the bodies of the vertebræ, and that the deformity follows—only as a natural consequence.

A few years ago Dr. Chas. Radcliff, physician to the Westminster Hospital at London, stated that, in the great majority of cases, caries of the spine is an unmistakably strumous affection, being neither more nor less than tuberculous infiltration of the bodies of the vertebræ, and that the changes in the bone are due to the melting down of this deposit, rather than to any strictly inflammatory process. This is in substance about what most writers up to the present time have taught. Some of the text-books, however, while treating of it as a disease of strumous origin, lay some stress on injury as an exciting cause; yet Wyeth, in his most excellent "Text-book on Surgery," published only two years ago, says: "It is believed that as between the predisposing and exciting causes of Pott's disease, the former deserve by far the greater consideration."

Within the last few years Virchow, Billroth, and others, have taken the ground that this disease is caused in most instances, if not all, by *fracture* of the bodies of one or more of the vertebræ. They are led to this conclusion by the fact that in many autopsies the brain, lungs, and all the rest of the spinal column not immediately at the point of curvature, were in a perfectly healthy condition.

The deformity also occurs in families unusually free from tuberculous diseases, and when the supposed tuberculous matter has been submitted to the microscope, it has been found to consist only of pus, with some detritus of bone, cartilage and periosteum. The history of most cases also, if not obscure, can be traced to an injury from a fall or otherwise, and finally, in autopsies, where the disease was not far advanced, a sequestrum with well-marked fracture has been found. That fractures of the bodies of the vertebræ do occur, followed by displacement of the fragments, compression of the cord, and death, we all know. At the January meeting of the Jasper County Medical Society, Dr. Brooks, of Carthage, exhibited a beautiful specimen of frac-

ture of the bodies of the seventh cervical and first dorsal vertebra, the subject having been a man somewhat advanced in years. But if the fragments had not been displaced, and the cord in no way injured, what was there to produce immediate death? In other words, if some of these worst fractures produce immediate death, what becomes of the milder cases, of children especially, who do not usually receive severe injuries, and the fragments of whose bones when broken are not so liable to be displaced? Only a short time ago I had under my care a case of this deformity in which the origin of the disease was distinctly traced to a fall from a dining-table. In this case father, mother, and several brothers and sisters, were remarkably healthy, and, so far as they knew, no form of tuberculous disease had ever existed among their ancestors.

Assuming that the fracture of a vertebra is the cause of this deformity, the pathology may be thus explained: When we remember that the bodies of the vertebræ are firmly held in place by the intervertebral fibro-cartilages, and by the anterior and posterior common ligaments, and also that the body of each vertebra originally consists of three pieces, derived from three separate points of ossification, and that these pieces are not firmly united before the sixteenth year, we can easily conceive how, with a ligamentous attachment so firm to a bony substance, so frail, a fall from a table, chair or bed, or even a fall against a wall, bending the upper portion of the spine backwards, might fracture the body of a vertebra, or at least separate one of the original pieces from the rest. There being, however, no considerable displacement of the fragments, on account of the firmness of the ligaments, the child continues to move about, keeping up sufficient motion between the fragments to prevent bony union, and to produce irritation, inflammation, and finally suppuration, resulting in caries and absorption of the bodies of the vertebræ, till the weakened structure yields under the superincumbent weight and falls forward as has been described, under tuberculosis, as the supposed cause.

If this destruction of bony tissue should be confined to one vertebra only, the resulting deformity would be angular, but as often happens, either from more than one being primarily affected, or from the extending of the pus cavity to the vertebræ above and below the original trouble, there may be a gradual giving way of several of the bodies, and in this case the deformity would not be so angular, but would be

more marked. In some autopsies it is impossible to tell at what point the caries began, several vertebræ being affected, the bodies being nearly or quite obliterated, and the arches pressed backward, and curve till the upper portion occupies nearly or quite a horizontal position. Strange as it may seem, though the spinal cord is constantly exposed to the action of the pus, it is rarely affected, and so far from being compressed by the crushing down of the bodies of the vertebræ, the arching backwards of the laminæ and the meeting in front of the still unaffected bodies, allow it even more than its accustomed room.

The pus in these cases, as in all others, has a tendency to seek an outlet, and following the line of least resistance, and appearing at points of the body some distance perhaps from the seat of the disease, is the most common reason adduced by the advocates of the strumous theory for its tuberculous origin. These abscesses do not, however, always find an external outlet, but are walled in in such a way that the more fluid portion is absorbed, and the residue, when mixed with detritus of bony matter, etc., gives the cheesy or tuberculous appearance as before stated.

If the injury occurs in the cervical vertebræ, the pus would likely follow the course of the longus colli muscle, making its way behind the trachea and œsophagus, and probably at last open into the thorax. It sometimes follows the scaleni or the sterno-mastoid and points at the upper border of the sternum or above the first rib. From the dorsal region it is most likely to find its way into the posterior mediastinum, passing through the diaphragm with the aorta, coursing along one or both iliac arteries below Poupart's ligament, and making its appearance in the femoral region. Probably, however, the most common as well as the best known of these spinal abscesses is that of the *psoas abscess*. Remembering that the psoas muscle rises from the sides of the bodies of the last dorsal and all the lumbar vertebræ, also from the edges of the intervertebral cartilages, and the bases of the corresponding transverse processes; that from this extensive origin the fibers converge, pass downward across the pelvis, and forward beneath Poupart's ligament, to be inserted into the trochanter minor; that throughout its entire course it is enveloped in a strong fascia, a portion of the iliac fascia, we can easily comprehend how, if the vertebræ corresponding to the origin of this muscle are affected, the pus would follow within the sheath and point in the region of the trochanter

minor. It is not to be understood, however, that the pus always follows these regular channels. It may break through the sheaths of the muscles at any point and wander through devious paths and make its appearance at unexpected places.

Kyphosis is, from its nature, a slow process, unless at the time of the injury there should have been considerable displacement. It usually occurs in children of very tender age, from two to eight years. The child has received a fall or a blow across the back, but makes no special complaint till the circumstance is forgotten. It then complains in a general way of soreness in the back, more apparent when lifted by the arms, or pushed to one side. It flinches or complains when washed with very warm water, when the sponge passes a certain point on the spinal column. The child is pale, anæmic, and little inclined to join in the common plays of other children, preferring to observe them from a safe distance, fearing a jostle. He walks very softly, so as to make as little movement as possible of the spine. He picks up a toy by flexing his knees and hips, keeping the spine nearly erect. As he rises he places his hand on a chair or on his knee for support. After walking he will stop and rest his chin upon his hands, supporting his elbows on a table or his mother's lap. At length an undue prominence of one or more of the spinous processes is observed, and then the deformity, with all its attendant ills, including emaciation, abscesses, etc., makes its appearance.

The prognosis in the first stages, under proper treatment, is hopeful; in the advance stages, after the destruction of the bodies of one or more vertebræ, the most that can be hoped for is bony union, *with* deformity. The reason for this is obvious, for if by any means the spinal column should be brought to its natural outlines, there would intervene between the segments of healthy tissue above and below, a space equal to that which had been destroyed, and which would be too great ever to be replaced or bridged over by new growth. The cure of the deformity then being out of the question, it is of the utmost importance that we should make an early diagnosis. To this end, whenever we find a child complaining in a way to lead to the suspicion that there might be spinal irritation, we should immediately ascertain if there is any localized tenderness. This may usually be ascertained by palpation, percussion, or by moving a hot sponge along the spine. It is also well to use rotation, flexion in different directions, and a slight longitudinal con-

cussion by using the hips as a lever and passing them suddenly upwards while the shoulders are fixed. The exact point of tenderness is also sometimes well shown by passing the two electrodes of a faradic battery slowly along the spine, one on each side of the spinous processes. If localized tenderness is found, that alone should put us on our guard against a malady which, when fully developed, we have no adequate means to combat.

In regard to treatment there is scarcely any disease in which the means have been more varied or less satisfactory. Its treatment as tuberculosis has been without the least avail, and mechanical appliances to remedy the deformity while the disease is yet in its active stage, or even to sustain the superincumbent weight, have, as a rule, proved worse than useless.

Since, however, recent investigations have demonstrated the pathological conditions existing in the great majority of cases, the treatment has been more rational and accordingly more successful. If a surgeon should be called in a case of fractured femur, and instead of immobilizing the parts, should put the patient upon cod liver oil and iodide of potassium, and order outdoor exercise every day, no one would expect a favorable result, yet this is about the treatment usually given to these cases of fractured spine.

The first and most important principle of treatment in these cases is just the same that it is in all other cases of fracture—perfect immobility of the parts till firm union has taken place, and this in the most favorable cases will require many months, those more severe perhaps requiring years. This immobility can be obtained only with the patient in the horizontal position; and here is the chief difficulty we have to contend with. We visit a patient and find that he has symptoms of vertebral fracture, with slight deformity, indicated by undue prominence of one or more of the spinous processes. The child is still able to move about, yet his motions are peculiarly guarded and careful, that he may avoid all jarring of the spinal column. His parents are anxious that he shall take even more exercise than he is inclined to do, and it may be hard to convince them that it is necessary for the little patient to assume at once and for so long a period, a position that does not seem warranted by the immediate exigencies of the case. When, however, they fully understand that the health and even the life of the patient, as well as the prevention of deformity, depend on

this course, all opposition is likely to yield. Even the patient himself soon becomes reconciled to the confinement, as in this way he finds immunity from pain, which can be secured in no other way. The confinement, instead of depressing the vital powers, usually has just the contrary effect, so that the health in every way improves, good, nutritious diet being usually demanded, with medication only to meet such occasional conditions as may from time to time demand attention.

If there is as yet little or no deformity, a hard hair or moss mattress is all that is necessary in the way of a bed, but where the deformity is considerable it may be necessary to procure a water bed, which has many advantages over an ordinary mattress.

Active symptoms, as indicated by pain and hyperæmia, should be met by antiphlogistic treatment. Among these, local depletion and the use of the ice-bag of oiled silk are probably the best. During this period the patient should assume the *prone* position, not only for the more convenient application of remedies and the relief of hypostatic congestion, but for the greater comfort of the patient. An examination should be made from time to time in order to ascertain as nearly as possible the progress or regress of the case, just as in other fractures, but it is not likely that the deficient portions of the spinal column will be bridged over either by callus or osteophytes in a period of time much less than twelve to eighteen months. When this result has apparently been accomplished, the patient may be allowed to carefully test his ability to assume the erect position, but he must again immediately resume the horizontal position on the least return of unfavorable symptoms.

The limits of this paper will not permit me to enter in detail into a description of the methods that have been resorted to, to secure immobility of the parts or even of those that have been on trial proved most successful. As in ordinary fractures, some well-fitting splint is necessary to secure immobility of the fragments, so in these cases as soon as the active symptoms are past we should supplement the benefits of the horizontal position by those of some well-fitting support.

In many cases, all that is required is to secure the child to the mattress by appropriate bands or straps around the hips, shoulders and head. If the mattress or a strip of stout sheeting is tightly stretched in a stout iron frame, it

readily permits the patient to be moved from place to place.

Dr. Vayre's plaster-of-paris jacket has the merit of being cheap and easily applied. It was originally supposed that if the patient were suspended and the jacket applied, it would keep the injured parts of the spine from coming together by acting as a longitudinal support. In practice, however, this idea has proved utterly fallacious, without, however, detracting from the value of the jacket when used in connection with the horizontal position.

Dr. Bauer, of St. Louis, has invented a very neat cuirass, consisting of a frame of soft iron fitted properly to the patient, lined with galvanized wire gauze, and properly padded. Handles are affixed by which the patient may be carried from place to place, or even given outdoor recreation. A support of this kind is especially useful after union has taken place, to guard the patient against accident, and to restrain too free voluntary motion.

An objection to this cuirass is its cost, and the fact that it can only be made by a skilled mechanic, using a plaster cast of the patient as a model.

Distraction or longitudinal extension by means of cords and pulleys was formerly much used by French surgeons for the purpose of relieving the deformity. Though unsuccessful for that purpose it seems that it might be used to a slight extent to assist in diminishing pressure, just as we use extension in ordinary fractures.

Paralysis occurring during the progress of the disease is always an alarming symptom, yet it is often relieved by the horizontal position without any special treatment. Abscesses occurring during the progress of the disease are generally of the kind known as cold abscesses, show but little tendency to point, and generally should not be interfered with; but if they should be superficial or have a tendency to penetrate the deeper tissues, or to encroach upon important organs, it might be better to lay them open. Aspiration affords present relief, but they will rapidly refill so long as suppuration is going on at the original site of the injury. The treatment of the psoas abscess does not come within the scope of this paper. It usually indicates a fatal termination of the disease, the patient yielding to hectic, anæmia and septicæmia.

Nourishing diet and proper hygienic measures are of the utmost importance in all stages of the disease, while quinine, iron, sedatives, etc., must be resorted to when required on general principles.

Translations

Gonorrheal Salpingitis.

BY DR. TERRILLON.

[Translated for the CINCINNATI MEDICAL NEWS, from the French, by Dr. H. Illowy, Cincinnati, Ohio.—Continued from March Issue.]

The mode of development of gonorrheal salpingitis presents a great many variations.

Most frequently the patient is at first affected with an acute classic gonorrheal vaginitis, then some phenomena of endometritis make their appearance, and finally, towards the third or fourth week, violent pains in the lower portion of the abdomen. At this period the patient takes to her bed, the fever reappears, there is a puffing out of the belly, vomiting, in short, a pelvi-peritonitis. On examination, we find the signs of a beginning salpingitis. Sometimes the reactionary phenomena are very much less accentuated, and we have only a more or less localized pain, limited to one or the other side of the lower portion of the belly.

In another category the facts disclose a gonorrhea with slight vaginitis. Then, after a certain time, the menses become irregular, painful, and towards the fifth or sixth month after the beginning of the gonorrhea, marked symptoms of a pelvi-peritonitis set in and last five or six days. Then everything quiets down, but a salpingitis remains.

In another order of cases we are confronted by young women but lately married who present attenuated symptoms of a pelvi-peritonitis, or the signs of a salpingitis. On examination, no trace of a blennorrhagia is found, but the patient tells a tale of white discharges, that her linen occasionally presents yellowish spots, and on inspection it will be seen that a yellowish muco-pus is discharged from the orifice of the cervix. The husband presents no sign of infection; but if you question him you will learn that about two or three years ago he had a gonorrhea, of which, however, no trace remains, or nothing but a drop or two discharged in the morning.

Dr. Terrillon believes that we must look for the cause of the salpingitis in the old blennorrhagia of the husband. In fact, he has found that the sperm of individuals who have

once had blennorrhagia present a notable quantity of pus globules, especially if an epididymitis exist; at the time of ejaculation it has a yellowish color. This infected sperm of an attenuated virulence would determine a uterine and tubal gonorrhea without affecting the vaginal mucous membrane.

The most remarkable feature of blennorrhagic salpingitis is the hypertrophy of the villousities, which have the appearance of small buds standing out into the cavity; there is also hypertrophy of the mucous membrane. The cavity contains muco-pus in which at the outset the gonococcus is found; later on this disappears. Almost always the peritoneal orifice of the tube is closed; whence the frequency of pyosalpinx. If the pus flows out through the uterus, it gives rise to an interminable flow; in the contrary case there is danger of rupture. The ovary is but slightly affected.

In the blennorrhagic form of salpingitis metrorrhagias and menorrhagias are abundant. The true characteristic is, however, in the mode of beginning.

When the salpingitis is simply a catarrh of the mucous membrane, the patient has a painful infirmity which heals at the period of the menopause. Nevertheless, grave peritoneal accidents may supervene at any time.

When pus forms and becomes encysted, rupture is to be feared. It may occur into the uterus, into the rectum or into the peritoneum. The accident occurs suddenly, without any previous warning to the patient. Sometimes the symptoms of acute general peritonitis appear at the outset of a salpingitis, even when there is no purulent collection, but usually it does not occur except as a pelvi-peritonitis, entailing the formation of false membrane; this false membrane may rupture, a fresh quantity of pus contaminates the adjoining healthy portion of the serous membrane, and thus it goes on; thus frequent small discharges into the lower basin may occur. The woman afflicted with gonorrheal salpingitis is usually sterile, for the malady is almost always double.

For M. Terrillon curetting can but modify the uterine mucous membrane, which is at the same time affected and thus somewhat ease the patient; the tube remains in the same state. The medical treatment is symptomatic. For the pain, rest in bed is excellent. Vaginal irrigation is also a good measure; the patient is placed in position as if for examination with the speculum and a certain quantity of warm

water is injected; as soon as the patient complains of too great heat, irrigation is arrested by obliterating the vulvar orifice. After several minutes the water is allowed to flow out and the process recommenced. There should pass in the vagina but a little in an hour. Blisters and the hot iron applied to the abdominal parietes also produce good effects. For the very frequent constipation repeated purgation, and against the accidents of pelvi-peritonitis, absolute repose, cataplasms, revulsives and leeches.

The medical measures can ameliorate very much the condition of the patient and even bring about the semblance of a cure, but we can not affirm that the patient will not have a relapse, or a return of the malady, even after a very long time of absolute freedom.—*Gazette de Gynecology U. M. C.*

LAXATIVE FOR CHILDREN.—Ferrand.

R. —Manna, ʒvi
 Magnesia,
 Sulphur, āā ʒiss
 Mel., ʒvi

M. Sig. One to two dessertspoonfuls in a cup of warm milk or weak tea.—*Ibid.*

Medicine and Physicians in Russia.

BY DR. PERFILIEFF.

Translated for the CINCINNATI MEDICAL NEWS from the *Bulletin General de Therapeutique*, Paris, by E. A. Quetin, Juge de Paix, Tonnerre, France.

M. Perfilieff, well known in Russia by his studies in public and social hygiene, and by his publications upon the desiderata of medical teaching and sanitary organization in Russia, speaks this time of medicine and physicians. He observes that the natural sciences are too sparingly and badly taught in Russian gymnasiums, and that, during their stay at the Faculty, the medical students are content with studying the theory of medicine without acquiring enough practical knowledge. The author complains that young physicians confine themselves to specialties as soon as they obtain their diplomas, so that there are no (or but very few) physicians qualified in natural philosophy.

The country has no need of female physicians; but these may usefully practice medicine within restricted limits, well

defined, or among the Mahommedan tribes in the empire, whose religion and customs are opposed to the practice of the medical art by men.

The sanitary organization of the empire and the sanitary conditions of life with most of the inhabitants leave much to desire. Mortality is much higher in Russia than in other countries. Of 1,400,000 male children born in 1855, within twenty-one years (in 1876—time of the conscription) 610,000, or 43 per 100 only, were found living. Among 1,512,202 boys born in 1862, in 1882 (time of the conscription) 777,769, or 51 per 100, were found living. Among 382,109 called in 1884, 71,697 men, or 19 per 100, were found, after medical examination, incapable for military service. The military incapacity is in most cases determined (in 32.9 per 100 cases) by affections of the bones, articulations and muscles.

Those sad percentages need no commentaries and show that if France is threatened with depopulation on account of its feeble natality, Russia, whose natality is considerable, is threatened especially by the physical degeneration of its inhabitants, a degeneration which was ascertained repeatedly on all sides through the latest statistical inquiries of Russian hygienists.

Treatment of Hepatic Colics with Olive Oil.

Resume of a Contribution by Dr. E. Willemin, at Vichy, ex-House Surgeon of the Hospitals in Paris.

From the *Bulletin General de Therapeutique*, Paris, March 30, 1891,
Translated by E. A. Quetin, Juge de Paix, Tonnerre, France.

For several years already, the attention of physicians was called to the use of olive oil at high doses in the treatment of hepatic colics. About fifteen years ago that remedy so simple was brought to notice in the United States. Soon after, it was also experimented with in England, and Kennedy, Thompson and Singleton Smith were the first to publish the successes they derived from that method. But, whilst its usage had become almost vulgarized abroad, it was not much employed in France until after the communication of Dr. Tust Tonâtre in the *Archives Roumaines de Medecine et de Chirurgie*, Paris, 1887. He affirmed that this medication, prescribed every day by his colleagues in New Orleans, always brought, besides the cure of the pains, as a most surprising

result, the complete or nearly complete evacuation of the biliary calculi found in the gall bladder.

Those who know how dreadful may be hepatic colics in their intensity and duration, can not fail of being interested in reading Dr. Tonâtre's communication: his affirmations are compelling the attention of physicians, and challenge their controlling investigations. Thus, since that time, many practitioners have tried that medication and published the results they obtained, whilst several scientists made interesting disquisitions concerning the mode of action of the oil.

For me, during the last summer season, I had several times occasion to employ that treatment among patients who had come to Vichy for attending to a lithiasic affection of the liver, and were seized, during their attendance, by renewed hepatic colics; the excellent results I constantly obtained have induced me to publish these observations. As no systematic work has yet been done upon this subject, it seemed to me interesting to reunite the various reports that have come to light touching the effects and mode of action of the oil.

Here the writer gives an account of more than twenty observations made by foreign and French physicians, premising them with the following conclusions:

"The clinic fact, the cure of pain, thanks to the use of oil during a crisis of hepatic colics, is assuredly the capital point under consideration. Is it exact that the use of oil stops those pains? In order to answer that question, it is sufficient to read the observations where that medicament has been resorted to; it will be seen that, in almost all the cases, the oil administered before, during or after an hepatic crisis had the most happy influence in preventing or calming the sufferings of the patient. The most surprising particularity of this cure is perhaps the rapidity with which it occurs, as will be seen in all my observations."

Dr. Tonâtre, at the end of his communication, adds that "twenty physicians in New Orleans have repeatedly seen more than sixty times the same excellent results from the administration of oil."

Dr. Huchard (*Revue Generale de Clinique et de Therapeutique*, 20 Mai, 1890) asserts that the same mode of treatment brings the disappearance of hepatic colic.

Last, I had the opportunity of seeing, in the service of my masters, M. Bucquoy and M. Ferrand, two women affected with hepatic crises. The administration of a glassful of oil

was sufficient to stop their pains. Those cases decided me to try oil against the acute crises under my care at Vichy. I must abridge the observations I have gathered, and especially the description of symptoms showing I had to deal with hepatic colics; however, this diagnostic can in no wise be doubted, for with every one of my patients it was borne by several other physicians.

PERSONAL OBSERVATIONS.

Observation 1. Mrs. G——, forty-four years old. Two years ago, in consequence of a great sorrow, the patient was taken with pains about the stomach and liver, at first dumb and slight, and then transformed into acute crises which kept her abed for a day or two. For several months, those crises multiplied. The sick woman comes to Vichy in May, 1890. On May 20th, after ten days of treatment, she has a slight crisis. On June 1st, a new crisis of dumb pains, which become excessive on the following day; I find the patient a prey to horrible pains, especially on a level with the *vesica biliaria*, which can not be touched, incessant nauseas, no *icterus*. The patient can find no rest on her bed, and positively refuses morphine. I prevail, then, upon her, in spite of her nauseas, her disgust and lack of faith in remedies, to drink a glassful of oil. Almost instantly, to our great astonishment, the nausea ceased, the pains disappeared, and a complete calm succeeded. On the next day, the patient, being quite well, resumes her thermal treatment, and for eight months she has not had any severe hepatic crises, as I have just heard from her.

Observation 2. Mrs. A——, thirty-seven years old. In 1879 and 1881, she experiences two very violent and persisting crises of hepatic colics. In December, 1889, in consequence of protracted anxieties, the sick woman is seized again with hepatic colics returning almost every week. On June 30th, 1890, a crisis much more violent intervenes, lasting several days and determining a persisting, *ictère*. On August 22d the patient arrives at Vichy, the complexion is very yellow, stools discolored, urine dark; the liver has increased in volume, the biliary vesicle is large and tolerably hard; inappetence, emaciation, general weakness. August 23d the patient has a crisis extremely violent; at 5 o'clock I find her tortured with pains on her bed; she suffers from nausea, and reluctantly consents to drink a glassful of oil. As soon as she has swallowed it, the nauseas cease, the pain

subsides, not only the acute throbbings, but even that dolorous sensation in the right side which generally lasts for several days after her crises. One hour after that medication, she takes with appetite some broth, meat and fruit. On the 25th of August, a new crisis declared itself in the night; the sufferings were still very violent and accompanied with nausea; another glassful of oil calms again instantly her sufferings, so well, that one hour later she comes down to breakfast. On the morrow, the patient was coming to see me, when, on her way, she was taken with a new crisis; her pains are so acute that she arrives in tears, and wants to leave Vichy as soon as possible. I try friction upon the liver, for ten minutes, but in vain; finally I give her a third glass of oil. The relief occurs instantly, and maintains itself to the end of the cure. When the patient leaves Vichy, the *ictère* has disappeared, the liver has diminished, the biliary vesicle decreased, strength has returned. Her weight, which had come down three pounds during the first days, is the same as upon her arrival. Three months later, I meet again that patient: she has gained six more pounds, and her health is excellent.

(The writer continues with an account of several more observations equally favorable to the medication, then proceeds to mention cases in which the oil brought the evacuation of biliary calculi of cholesterine in the stools.)

Dr. Cazenave de la Roche has communicated to me the following case: In 1887 he administered, in two doses, twenty-four spoonfuls of oil to a sick woman affected with hepatic colics; all other means of relief had been tried without success. The pains disappeared, and the patients evacuated in her stools eleven calculi of different sizes composed of cholesterine.

Selections.

How Shall We Cure Croup?

BY E. F. STARR, M.D., NACOOCHIE, GA.

By this term I mean membranous croup, in contradistinction to the spasmodic form; and in what I shall say on this subject I shall not claim entire originality, but endeavor to bring forward and enforce upon the minds of practitioners some facts that if well observed and carried out will prove a

source of utility and comfort to such as may have to treat this formidable disease. If I can present these facts and the method of treatment so as to make them as clear to the minds of those who read as they are to my own, and can enlist general belief in the statement, I shall have accomplished my object and shall have done a good work.

I will not discuss the question of the identity of membranous croup and diphtheria, or whether or not all cases of croup are diphtheritic in character. I do not believe they are, but be this as it may, I shall now use the same treatment in the main for both. During most of the past this disease has been an *opprobrium medicorum*, and that no one treatment is acknowledged and followed as effective and reliable is manifest in the fact that so many different and varying formulas are being successively and from time to time proposed. I am now glad to believe that this state of things need not be perpetuated. In former years I myself regarded an established case of croup as about equivalent to a death warrant, but now I would go about the treatment of a case, not too long delayed, with nearly as much confidence as I would a case of remitting fever with plenty of quinine in my possession.

The pathology and symptoms are too well known to require notice here, but in reference to the treatment let it first be stated what should not be done, for now I eschew almost entirely the practice I formerly most trusted; that is, the administration of emetics, especially that form of them composed of tartar emetic. Do not give them. Persistent emesis is distressing and prostrating to the child, and, except in very rare instances, is ineffectual and unsuccessful. Neither, as a general rule, or scarcely at all, should purgatives be administered in the beginning of the treatment with object of catharsis, for this would interfere with the proper administration and the desired action and effect of the main remedy, the remedy most to be relied on and persisted in.

The indication for the treatment, in my view of the case, is to so affect the blood and the diseased locality as, first, to arrest the continuance of the deposit in the larynx and trachea, and, second, to soften and dissolve or loosen that which has already been exuded, so that it may be expelled by an effort of coughing. Can this be done? My experience teaches me that it can. In past time some of the fathers were known to proclaim that calomel was the sheet-anchor, and I have no doubt they sometimes succeeded with

it, but not often. How did they administer it? Usually in large doses, hence in purgative doses, and herein was the failure. It was too speedily expelled from the system. They did not, it seems, fully apprehend the philosophy of its effect; that is, of its curative effect. They desired its purgative effect, and it possessed in their eyes a sort of hidden magic. They gave it in purgative doses, but we may suppose in some cases it would remain long enough in the child's stomach to be absorbed and produce the necessary constitutional and salutary effect, and hence their occasional success, enough to make them believe it a useful remedy; but by want of proper manipulation, and by reason of other influences brought to bear against calomel fifty or sixty years ago by a set of arrant quacks and impostors (the Thompsonians), it fell into some little disrepute and failed to be graded into proper line and to be established as *the* remedy for membranous croup. In the hands of the profession it did not grow into the full stature of its inherent capacity, and it is safe to say it has not even done so yet. Let us hope this may not remain true indefinitely. How, then, shall we proceed to secure its curative effect, since calomel is the remedy?

In the first place, let it be remembered it is not to be given in purgative doses, for this would prevent its curative effect. It must be given in a way to secure its permeating and modifying effect upon the circulating fluids and the systemic condition; and to this end it should be given in small doses and frequently repeated. A child from one to three years old, after having a dose of two grains (or even three grains if there has been delay), should be given one grain every hour, promptly, persistently and without failure. If any of this one grain is wasted, let enough be added to make up for waste. If these doses incline to purge, add a little paregoric or a drop or two of laudanum to prevent. If a dose is thrown up or rejected, replace with another dose immediately. As auxiliary treatment I usually administer also a febrifuge like this:

R. Sweet nitre,
Antim. wine,
Syrup ipecac,
Paregoric, aa q.s.

M.—From half to a teaspoonful two to four hours apart.

If there is much febrile excitement, I generally use two or three drops veratrum viride three or four hours apart to

restrain the circulation, and in addition to these I use and advise a small blistering plaster over the larynx or upper windpipe. These latter measures are resorted to as precautionary, but the chief reliance is placed in the calomel.

During the first hours of this treatment the symptoms may seem to march steadily on towards suffocation, but if properly administered and persisted in, the physician or friends will usually, in the course of twelve or fifteen hours, have the pleasure of observing a marked change for the better in the progress of the symptoms, the sound of the breathing will indicate a growing looseness in the obstruction, and after this, by an effort of the child—a smart struggle, it may be—the accumulation will be forced up into the mouth and may be wiped out, or perhaps may be swallowed, but in either case greatly to the relief of the patient. It is gratifying, ay, it is simply beautiful, to witness the effect of the treatment, the manner in which the obstruction is broken up, and the change from the condition of impending suffocation to that of comparative freedom of respiration. When this occurs the calomel should be discontinued and some action of the bowels procured. There is but little danger of salivation, but it would be preferable to suffocation. I have not known it to occur.—*Atlanta Med. and Surg. Journal.*

Belladonna in Early Stages of Labor

A discussion reported in a recent number of an English journal upon the management of the early stages of labor has suggested to me the possible advantages of advising the use of a drug which, in my practice, has been of immeasurable benefit, saving considerable pain to the patient and materially diminishing the expected period of the labor. In primiparæ especially we often find, after a prolonged period of "pains" of more or less intensity, that the os has not enlarged beyond the size of a shilling, with thin, sharp edges, and, although the pains are fairly rapid and apparently severe, the progress of dilatation, while not entirely suspended, is excessively slow. With this condition, the inexperience of primiparæ helps to induce a form of general irritability, tending to still further delay and distress, and perhaps ultimately to complete inertia. On recognizing the earliest stages of this condition, as well as the more intense one of a completely rigid os, where, with extreme con-

tractions, no dilatation whatever occurs, I have given large doses of belladonna with marked and in some cases most startling effect. Dr. Playfair, in the discussion referred to, commends the use of chloral in cases similar to those above described, but, apart from the marked tendency to vomiting engendered by the chloral, in my hands the belladonna has acted more decisively and effectually. It would be waste of space to enter into details of cases, but within the last three years I have invariably used it in any case which suggested a prolonged first stage, with a consistent result—a decrease of pain and an increase in the rapidity of dilatation. The dose usually given was either twenty or thirty minims of a reliable officinal tincture every hour, or oftener. I can not recollect having to give more than three doses, satisfactory dilatation usually following the first or second draught. Belladonna is retained more readily than either chloral or opium, and although it was taught that vomiting had a tendency to relax rigidity—presumably by reflex action through the sympathetic apparatus—the fatigue caused by this unpleasantly depressing operation more then compensates for any possible benefit. If the publication of this memorandum should direct sufficient attention to this special use of belladonna, I would strongly advise any who should try it not to give less than twenty minims; a smaller quantity would be unsatisfactory. Let me also state that, while wishing to avoid physiological reasoning in a purely practical paper, a reference to "Ringer's Treatise on Therapeutics," on the action of belladonna upon the spinal cord will clear this suggestion from empiricism. Of course, it may be inferred that hypodermics of atropine should answer more effectually, but the use of the somewhat painful needle is surrounded by a halo of suspicion which unnecessarily alarms the patient, and, when the "draught" is free from this objection and answers the purpose, why cause needless alarm? Much has yet to be said and written concerning ethics of the surroundings of "women in travail."—*M. Asher, L. R. C. I., L. K. Q., etc., Lithgow, N. S. W., in Australasian Medical Gazette.*

Medical and Social Aspects of Abortion.

At the third General Meeting of Russian Medical Men at St. Petersburg, Dr. Natalia V. Thalberg, a woman doctor of Kiev, read a communication (Proceedings, No. 8, 1889, p. 256) on criminal abortion, and a rational struggle against

that steadily progressing social evil. She says that a considerable number of cases of artificial abortion give rise to grave and permanent disturbances in the woman's health, not unfrequently ending in death. Both in Western Europe and also in Russia, criminal abortion has at present attained great dimensions and manifests unmistakably a harmful influence on the health of the population. A truly regretful circumstance is the increasing assistance in the matter rendered to women by the members of the medical profession; and its ill effect is enhanced by the fact that often medical art proves powerless to obviate the injurious effects of the abortion it produces, due especially to a hasty and clumsy performance of the operation, and also to the violation of elementary rules of precaution during the after period. Apart from austere views entertained by modern society in regard to an extra-matrimonial pregnancy, and from increasing poverty, the main causes of a progressive increase of abortion are: Defective moral and mental education of women, and woman's ignorance of the criminality of abortion, and especially of its harmful effects on her own health. An indirect but still powerful cause of the spread of abortion is found in the defective sense and principles of those members of the medical profession who render their assistance in the matter. In view of these facts, a rational struggle against the evil demands joint action by the authorities and the medical profession. The initiative in the matter belongs undoubtedly to the profession, since the medical man, whom both married and single women solicit to procure abortion, knows best the consequences of its performance. Hence, an imperative duty arises for the profession to draw the attention of the community to the evil, to elucidate its causation, and to find out effective means for its prevention. Dr. Thalberg suggests the following measures to restrict criminal abortion: 1. To reduce to the lowest point possible the legal punishment of women who have abortions performed, since severe laws have not served to prevent them from undergoing the operation, while they act powerfully in restraining them from denouncing the abortionist. 2. To disseminate knowledge of the injurious effects and dangers of abortion, by means of pamphlets, public lectures, etc. 3. To establish numerous lying-in hospitals and homes for foundlings all over the country. 4. To promote the education of women tending to elevate their mental and moral level.

[Our Russian translator suggests that we may take the liberty to express doubt in regard to the actual degree of effectiveness of measures proposed by Dr. Thalberg. Obviously, her methods are nothing else than mere palliatives. However humane, they do not touch in the least the cardinal etiological factors of the social evil. Those factors are, (1), in Russia, an appallingly progressing wholesale pauperism which, on one hand, makes the establishment of a "legal" family less and less accessible, because of its expensiveness; and, on the other hand, converts the appearance of every child into a true disaster, and (2), the ethically immoral moral codex of the modern "civilized" community, which sentences to moral death every unhappy woman who, having no possibility or opportunity to establish a "legal" home, gives way to temptation to the performance of her sexual functions. He says that only those measures can prove effective against the slaughter of intra-uterine children, which honestly and courageously strive to improve the economical conditions of the community and to humanize the moral codex of the latter. None of the great social evils undermining the modern community can possibly be remedied by moralizing or by legal or hygienic trifles which leave intact the essence of the matter.]—*Med. & Sur. Reporter*.

Uterine Myomas—Report of Sixty Cases Treated by Electricity.

Dr. J. H. Kellogg, of Battle Creek, Michigan (*Times and Register*, February, 1891), after giving the history of all the cases treated, sums up the results as follows:

Of the fifty-six cases treated long enough to determine the value of the treatment, the growth was in thirty-two cases interstitial, in nine cases subperitoneal, and in fifteen cases subperitoneal and interstitial combined.

Of the thirty-two cases of interstitial growth, fourteen were cured; in nine the tumor was diminished in size and the other symptoms cured; in six the tumor was not diminished in size, but all the other symptoms were cured, and in three the tumor was diminished in size, although the patient was partially relieved of her symptoms.

In the nine cases of subperitoneal growth the patient was either not at all benefited or made worse in four cases; but

slightly benefited in one case; relieved of other symptoms, although the tumor was diminished in size, in two cases, and cured of other symptoms and tumor diminished in size in two cases.

In the fifteen cases of interstitial and subperitoneal growth there was complete failure in five cases; slight benefit in one case; relief of symptoms, without diminution in size of the tumor, in four cases, and a relief of all symptoms, with a diminution in the size of the tumor, in five cases.

The author declares himself as not a partisan of either the surgical or the electrical method of the treatment of fibroid tumors, and in his work he has endeavored to acquaint himself with the merits of both methods by personal experience, and by studying closely the results obtained by the best operators, and he has reached the conclusion that neither method is the one to be universally adopted, but that each has its legitimate sphere, in which it enjoys a superiority over any and all other methods. He has noted that a certain number of those treated by electricity were not benefited, but made worse, by the treatment, and these were subsequently submitted to surgical operation for the removal of the appendages, and were cured thereby. These cases constituted only a small proportion of the whole number treated—less than thirteen per cent.—and he thinks that this fairly represents the proportion of cases which should be treated by the surgical method.

A question of great practical interest is, how to select the cases suitable for each method, respectively. Upon this point he writes as follows:

Cases which should be Treated by Electricity.—From his experience, eighty-four per cent. of all the cases treated come under this head, and he remarks that the previous treatment by electricity, of such cases as require operation, does not in any way interfere with or complicate subsequent operation. Small tumors are pretty sure to be benefited by electrolysis irrespective of the situation of the growth. There is a prospect of complete cure in interstitial growths of small or moderate sizes, and an almost equally good prospect of cure is afforded by this method in cases in which the greater portion of the growth is interstitial in character. In women approaching the climacteric period, this method is especially indicated, as it has a marked effect in hastening the establishment of the menopause, the influence of which,

in obliterating growths of this kind, is a matter of common observation.

Cases in which Surgical Means are Indicated.—The surgical measures against uterine myoma are: First, removal of the tumor itself or of the entire uterus; and, second, the removal of the uterine appendages. He places under this heading tumors of large size, growing rapidly, where the menopause is remote and where electricity has been tried without success. Subperitoneal growths attached by a narrow pedicle, and large subperitoneal growths, if beyond the reach of puncture, or where the intra uterine method of treatment has failed, and also such cases as are complicated by diseases of the appendages, as in these cases the suffering of the patient is more apt to have its origin in the ovaries than in the tumor.

The author thinks that great mischief has already arisen, and still greater mischief will very likely arise, as the result of the idea that electrolysis is a perfectly safe method. Certain it is that safety in the employment of electrolysis is to be secured, as in ovariectomy, only by the most thorough employment of aseptics, and by the exercise of great wisdom and sound judgment on the part of the operator, and skill in diagnosis.—*Archives of Gynecology*.

Chronic Endometritis—the Treatment of by the Intra-uterine Applications of Boric Acid.

Dr. Alexander Duke, in the *British Medical Journal*, says: Having obtained the most decided benefit in the treatment of cases of vaginal leucorrhœa and erosion of the os and cervix uteri, both acute and chronic, by vaginal application of boric acid, and having also observed the rapidity with which the healing process is effected by the same treatment in cases of division of the cervix for stenosis, I not long since designed a convenient form of insufflator for the purpose. Thinking I could go a step further and apply the acid to the endometrium itself, I found that, by means of a slightly curved vulcanite tube something larger than a No. 12 catheter with tightly fitting rod or piston of the same material, I could safely do so.

The tube spoken of is charged for about two inches from its point by drawing back the piston and plunging the tube downward into powdered boric acid contained in some deep

receptacle, such as a wide-mouthed bottle. The point of tube being then inserted into the uterus, having been previously cleansed with my wire curette, which holds the secretion during removal, the piston is pushed home, and a stick of compressed boric acid is deposited in the uterus, the patulous condition of the os and cervix existing in these cases facilitating the introduction of the tube. By this simple means I have succeeded in curing quite a number of cases of this troublesome and intractable complaint, some of which had previously, both in my own practice and that of others, resisted the usual routine—caustic treatment. I also thoroughly dust over the vaginal walls with the powder at the same time.

Judging from my own experience, I should say that if this treatment be adopted (as described), the most chronic cases of endometritis should yield to a dozen such applications at most, at intervals of three or four days. It is now some years since Dr. Redmond, surgeon to the eye and ear cases in St. Vincent's Hospital, Dublin, having found the value of boric acid in cases of suppuration from the ear, was kind enough to suggest to me its suitability as a treatment in these cases. And it was while making trial of his valuable suggestion that I read a paper by Dr. Schwartz, of Halle, on the value of boric acid as a vaginal application in cases of leucorrhœa, which considerably strengthened the ideas I had then formed as to its use.

The facility with which the powder can be deposited on the cervix, os, and vaginal walls by my insufflator, either with or without the speculum, saves a good deal of time and trouble. And this plan of treatment will be found on trial much more popular with both patient and doctor than glycerine tampons or other moist or greasy applications.

The boric acid, besides acting as an antiseptic astringent and deodorizer, has also evidently some affinity for water, though not to so marked a degree as glycerine, so that it will also act as a depletant. And it will be only fair, when it has been freely applied, to notify this peculiarity of the powder to the patient.

I have now given the treatment described a fair trial and have found it most effective, even in more than three inveterate cases where the discharge had lasted for years and where the patient had found it necessary to constantly wear a diaper or sanitary towel.—*Archives of Gynecology.*

Some Recent Statements Concerning Diphtheria.

Upon the subject of diphtheria there is no greater living authority than Löffler; even Klebs, with all his discoveries, must take second place. Such being the acknowledged position of the former investigator, the synopsis of what he knows of diphtheria must prove of great interest. They are given in twelve paragraphs in the *Pacific Record*, translated from *Correspondenz Blatt fuer Schweizer Aerzte*, as follows:

1. The cause of diphtheria is the diphtheria bacillus. It is found in the excretions of the diseased mucous membranes.

2. The bacillus is expelled with the excretions. It may be deposited on anything in the neighborhood of the patient.

3. Diphtheritic patients contain bacilli capable of infection as long as there is the least trace of diseased tegument in existence, and even for several days after their disappearance.

4. Persons affected with diphtheria should be vigorously isolated as long as there are any bacilli present in their excretions. Children who have been affected with diphtheria should be kept removed from school for at least four weeks.

5. The bacilli of diphtheria preserve their vitality for four or five months in particles of membrane in dry condition. For this reason, all objects which may have come into contact with the excretions of diphtheritics, such as linen, bedding, drinking and eating utensils, clothing of the nurses, etc., should be disinfected by boiling water, or treatment with water vapor of 100° C. Rooms which have been occupied by diphtheritics should be disinfected with the same carefulness. The flooring should be washed repeatedly with hot sublimate solution (1:1000), walls and furniture should be rubbed with bread.

6. Investigations on the vitality of diphtheria bacilli in moist condition are not concluded yet. Possibly these bacilli preserve their vitality, when in moist condition, even longer than in dry condition. Humid and dark dwellings seem to be especially favorable to the preservation of diphtheritic virus. Such dwellings, therefore, have to be subjected to sanitary measures, especially in view of their thorough drying and accessibility of light and air. In moving from one house to another, great care should be taken for thorough disinfection of dwellings which have been infected.

7. Diphtheria bacilli will continue to thrive outside the body at temperature of 20° C. They grow very well in milk. For this reason the milk trade should be subjected to careful supervision. The sale of milk from dairies where cases of diphtheria have been located, should be forbidden.

8. The diphtheria-like diseases of numerous species of animals, of pigeons, chickens, calves, hogs, are not connected with the diphtheria bacillus of man. For this reason the diphtheria-like diseases of animals are not to be dreaded as sources of diphtheria in man.

9. Klein's statements on etiologic identity of the disease observed by him in cats, with diphtheria in man, have no demonstrative value as yet; they require further confirmation.

10. Lesions of the mucous membranes of the air passages favor attachment of the diphtheritic virus, while susceptible individuals may be attacked by the disease without such lesions.

11. During prevalence of diphtheria peculiar care should be bestowed on keeping the oral, nasal and guttural cavities of children perfectly clean. Besides this, prophylactic rinsings of the mouth and garglings with aromatic waters or weak sublimate solutions (1:10,000) are recommended for children.

12. An influence of determined meteorological elements favoring the spreading of diphtheria has failed until now to be ascertained in a positive way.—*Kansas City Medical Index.*

Cocaine in Oral Surgery.

Blersh, of Mannheim, Germany, in a recent article says: Few articles have been so much written about of late years as cocaine. By his discovery of its anæsthetic properties, the young Vienna physician, Dr. Koller, did incalculable service to suffering humanity. All the more, therefore, is it to be regretted that some persons, by gross exaggeration of trifling occurrences in the application of the drug, should seek to discredit so valuable a remedy, and after probably irrational modes of experiment, assert rash opinions, likely to deter timid operators from employing cocaine.

Cocaine injected in solutions of quite minimal strength, say 0.2 to 0.4 grain, into the gums is perfectly innoxious. Not every tooth can indeed be extracted without causing pain, even with help of cocaine, yet it does so far yield relief that most patients declare the operation to have occasioned very little suffering. To employ cocaine rightly, one must first of

all clearly understand its influence as an anæsthetic. This is strictly local. In injecting cocaine, only the tissues immediately surrounding the tooth to be removed should be permeated by the solution, and it should not be allowed to penetrate further, since otherwise it is liable to become absorbed by the blood-vessels, enters the circulation, and in large doses produces very serious effects.

Formerly I used to employ a ten per cent. solution of cocaine, but soon perceived that this was too strong, and during the last three years have found a five per cent. solution to meet all requirements. A five per cent. solution I prepare as follows: I have always a stock of Bœhringer's cocaine in tubes containing each $\frac{1}{4}$ gramme (= 3.8 grains). When the solution is needed, the contents of one such tube is introduced into an empty five gramme vial (it generally holds about six grammes = about 92 grains), which is then filled with distilled water containing one per cent. of carbolic acid solution. In this way I get a solution of cocaine of about five per cent. strength, the slight addition of carbolic acid enabling the solution to keep the better. The five-gramme vial suffices to fill a Pravaz glass syringe five times; a full syringe contains, therefore, about 0.77 grain of hydrochlorate of cocaine. Half a syringe injected is sufficient to produce in course of five or ten minutes an adequate anæsthesia.

When a tooth is to be extracted, the cocaine solution should previously be well rubbed into the surrounding gums. In doing so, the cotton wool employed must not be moistened to excess, or the solution will flow into the mouth, which should be avoided.

The Pravaz syringe is now half charged, and beginning at the collar of the tooth, is introduced along the roots on the labial side. The canule is now turned in order to produce a small aperture, or sac, into which the solution is injected till the tissues surrounding the roots change color. This pallor is of course only transitory, and disappears directly the cocaine has become absorbed by the gums and porous alveolæ. Before the canule is withdrawn, the gum should, if possible, be gently rubbed to increase the power of absorption. If, in withdrawing the canule, part of the solution should escape, the patient should be requested to rinse his mouth out. A similar injection is then carried out on the lingual or palatal side of the tooth. In most cases one will find that a $\frac{1}{4}$ syringe (= 0.192 grain of cocaine hydrochlorate) suffices. I never inject more than half a syringe.

After an injection one should wait five to ten minutes. The forceps, previously of course most carefully purified and disinfected, should be dipped into hot water so as to be warmed to at least blood-heat. If, with injections of cocaine of such minimal strength, any disagreeable results nevertheless follow, these are by no means symptoms of poisoning, but simply attacks of fainting, to which the patient would have been subject without the injection of cocaine. The fainting of patients is always an unpleasant incident, but can not be avoided. There are patients only too strongly inclined to faint. Probably every one of my professional brethren knows dozens of such cases. I therefore avoid employing injections of cocaine when fainting is to be apprehended, that is, with my timid patients, or those whose dread of the extraction of a tooth has caused them sleepless nights, and whose nerves are consequently shaken. If I do give such patients cocaine, it is only after administering a stimulant. That does not indeed prevent their fainting, but somewhat promotes the activity of the heart. Employed with proper knowledge and care in minimal doses of 0.190 to 0.385 grain, cocaine is unquestionably one of the safest of drugs, and has the further advantage of being so cheap that we can give the poorest patients the benefit of it, since, even if we receive no payment at all, 0.385 grain of cocaine costs only about a half-penny. The favorable opinion of the Prague professors concerning Bœhringer's Hydrochlorate of Cocaine I can fully confirm.—*Kansas City Med. Index.*

New York Letter of the Atlanta Medical and Surgical Journal.

THE TREATMENT OF LUPUS.

At the last meeting of the Academy this was the subject under consideration. The paper of the evening was read by Dr. Piffard, the well-known dermatologist. He stated that at one time lupus was confounded with cancer. It was then regarded as a manifestation of scrofula, and now it was believed to be a local tuberculosis. Many varieties of treatment had been recommended since the earliest times. The induction of a severe local inflammation by the application of an irritant was a method long in vogue. Biniodide of mercury was the agent usually employed; but the remedy was liable to cause injury, and generally proved too

mild a stimulant, so that its use had been discarded. Boring with a sharp point of silver nitrate was still resorted to by many; but it was inefficient, as many outlying cells were sure to escape. Absolute destruction of every particle of diseased tissue was essential to the production of a cure. Excision, if practicable, would seem to promise the best results. It could only be employed, however, when the disease was distinctly circumscribed, and not more than an inch or so in diameter. Relapse was more frequent than after operations for epithelioma, as it was more difficult to remove every diseased point. Treatment by the actual cautery alone was seldom employed, and was not often successful. Curetting alone was also unsatisfactory. A combination of curetting and the cautery was, however, about as valuable a plan of treatment known. The cautery should be heated to redness only. A useful procedure was scarification with a platinum knife heated to redness by means of electricity. Repeated operations were usually necessary. An anæsthetic was not always required; in any case ether must not be used, because of the danger of explosion; nitrous oxide gas and opium answered every purpose.

In regard to the Koch treatment, it might be said that the statements of its originator had not been verified. Many men not especially familiar with skin diseases had discharged cases of lupus as "cured." To the eye of the specialist, however, they did not appear so, for the significant apple jelly granules could always be detected either immediately or very soon after treatment had been discontinued. The cicatrix must appear completely colorless and blanched before it could be pronounced healthy. The action of Koch's fluid was certainly unique. It was unlike the action of such poisons as arsenic, strychnine or atropine, which was similar in the sick and the well. It was more like that of erysipelas or typhoid fever.

Dr. H. N. Heineman said that of the nine cases treated by the Koch method at Mt. Sinai Hospital, two had been pronounced cured, no relapse being noticeable seven weeks after treatment was discontinued. He believed that a combination of local and injection treatment would eventually prove of most value.

Dr. H. P. Loomis gave an account of a few cases treated at Bellevue Hospital. Of these only one was cured. Another, which was very severe, was improved so much after a short course of treatment as to demonstrate very conclu-

sively the great value of the remedy. Stereopticon views of these patients were exhibited, showing the different stages of the improvement under the action of the tuberculin. The most striking case was one of a very extensive lupus of the face and neck. After a short course of treatment all the active ulceration ceased, and the general aspect of the disease was greatly changed.

Dr. R. W. Taylor did not think that the bacillary origin of lupus had been proven, nor had its association with pulmonary phthisis been generally noticed.

Dr. G. H. Fox was not in favor of treating any case by excision. He liked the curette better. The actual cautery or galvano-cautery was not so satisfactory as the potential caustics, which had a selective action. The curette and some agent producing suppurative inflammation produced the most satisfactory results. He drew attention to the dental burr as a most effective instrument for destroying isolated tubercles. He had seen a number of cases treated by the Koch method, and regarded it as extremely valuable.

PREVENTION OF DIPHTHERIA.

The subject of diphtheria was again under consideration at the last meeting of the Academy Section in Pædiatrics, with especial regard to the question of prevention. Dr. A. Caillé, the chairman, opened the discussion. He stated that during the year 1890 there had been 1,400 deaths from the disease in New York alone. He thought that much could be done to prevent well children from contracting it. The early treatment of a naso-pharyngeal catarrh, and thorough cleansing of the mouth and teeth at all times, were points never to be neglected. He believed that the daily inspection of school children by physicians appointed by the city was quite practicable, and would be the means of saving many lives.

Dr. J. Lewis Smith said that Welch, of Baltimore, had induced diphtheria in animals with cultures of the Klebs-Löffler bacillus. It could now be positively believed that this was the specific organism of the disease. The germ was possessed with marvelous vitality and could be conveyed in many different ways. Exposure in the room or to the breath of a sick person was often sufficient. The clothing of nurses of children who had been sick, or of physicians who, on examination of a throat, had been spattered with sputum, might be the vehicle of contagion. There were

many walking cases, and the schools were often the means of bringing them in contact with the healthy. Prior to 1850, diphtheria did not prevail in New York. It then appeared, and the sewers became infected. Thus it happened that sewer gas produced the disease, and with the walking cases was the origin of most of the cases occurring here.

When a case developed in a family, all furniture which could be spared should be removed from the sick-room, and only those engaged in caring for the patient should be permitted to enter. Ventilation should be carefully attended to, and the air of the room should be permeated by some antiseptic vapor. The convalescent patient should be carefully disinfected, and kept apart from other children at least a month. In the after disinfection of the room sulphur fumigation should be used, but was not entirely reliable. In addition all surfaces should be washed with corrosive sublimate solution.

Dr. Prudden, the pathologist, believed that it had become possible to make a diagnosis of diphtheria by means of biological cultures of the baccilli found. He advised the use of mild antiseptic mouth washes as a preventive measure.

Dr. Jacobi drew attention to the appalling fact that 40,000 children had died from diphtheria in this city alone during the past thirty years. In the face of such a fact the indifference of the public as compared with the excitement apparent in the press over a single case of typhus fever in Bellevue Hospital was astounding. One of the greatest necessities was a temporary home to which the well children of the poor could be taken when a contagious disease had invaded the home. The teachers of the public schools should be taught to examine children's throats, and all suspected cases should be sent home.

Dr. L. Emmett Holt said that during the past four or five years there had not been an epidemic of diphtheria at the New York Infant Asylum. There were four hundred infants at this institution, nearly all under two years old, and more than half less than eighteen months. Sporadic cases appeared occasionally. As soon as they were observed each was isolated separately, and the ward from which they were taken was emptied. After fumigation with sulphur, all surfaces were washed with corrosive sublimate solution, and the iron bedsteads with a solution of carbolic acid. The throats of children who had been exposed were examined twice daily,

and their nasal cavities syringed with 1 to 5,000 bichloride solution.

CRANIOTOMY *versus* CESAREAN SECTION.

Is embryotomy of the living fetus ever justifiable? This was the question under discussion at the last meeting of the Section on Obstetrics at the Academy. Dr. E. H. Grandin read a paper advocating elective Cesarean section. He believed that with a better knowledge of pelvimetry, and with the great improvements which have been of late years made in the operations, a deliberate choice of Cesarean section would soon become the rule in cases in which the exact condition of affairs had been ascertained before other methods of delivery had been attempted and had failed. He thought the statistics of the operation misleading, as the majority of cases had been operated upon only as a last resort.

Dr. H. J. Garrigues was of the opinion that even with the improved Cesarean section, the operation was more fatal to the mother than craniotomy. The chances of saving the mother after craniotomy were five times greater than after Cesarean section. In certain exceptional cases the latter operation might be deliberately selected, as when the pelvis was generally contracted, rendering extraction of the child after craniotomy exceedingly difficult. As a rule, however, it was better to destroy the child. This was especially true in private practice. The operation of Cesarean section requires skilled assistance and a qualified abdominal surgeon.

Dr. Lusk said that he agreed thoroughly with the remarks of Dr. Garrigues. We had no moral right to balance one life against another, and decide to kill one human being to save another. His custom was to put the question to the mother and friends, stating without exaggeration the dangers of the different operations, and allow them to decide if they cared to take the extra risk involved in Cesarean section. The chances of the mother were certainly not so good. In those hospitals in which the mortality from Cesarean section had been so much reduced, that from craniotomy was almost nothing. The operations could not be compared with an ordinary laparotomy, for the conditions were different. A number of skilled assistants were necessary, while to do a craniotomy one skilled operator was all that was required.

WM. L. RUSSELL.

Proceedings of Societies.

Gynecological and Obstetrical Society of Baltimore, Md.—March Meeting.

The President, Dr. Henry M. Wilson, in the Chair.

Reported for the CINCINNATI MEDICAL NEWS by Wm. S. Gardner, M.D.,
Secretary, 712 N. Howard street, Baltimore, Md.

Dr. Howard A. Kelly read a paper upon the technique of the Cesarean section, described in a series of steps, from the selection of the case down to the after treatment. The relative and absolute indications were described. The Porro operation was rejected, excepting under special peculiar circumstances; for example, when there was good reason to suspect septic infection, as after prolonged efforts at delivery, at turning, or the use of the forceps, also in cases of large tumors occupying the body of the uterus, or in some cases of cancer or in uncontrollable hemorrhage from the placental site. Thus limited, the conservative operation and the Porro operation are mutually exclusive, not occupying the same field. It is a serious surgical error to mutilate a woman by performing the Porro operation where special indications do not exist. The mortality of the Porro operation is fully as great, and probably greater, than that of the conservative. In a healthy case free from sepsis, with unruptured membranes, it is not necessary to deliver the uterus from the abdomen before incising it and delivering the child. It is rarely necessary to use any constricting ligature around the cervical end of the uterus. Excessive hemorrhage from the placental site or the margin of the wound can very well be temporarily controlled by constricting the cervix with the hands of an assistant.

The uterine suture consists of deep sutures, embracing the peritoneum and muscularis, but not the decidua. About ten such sutures are needed. Between each of these deep sutures, half deep sutures can be passed, securing perfect coaptation of the peritoneal surfaces. The sero-serus sutures are not necessary in cases free from any suspicion of infection. In such clean cases, the uterus is dropped back into the abdomen and covered with the omentum. If there exists a slight suspicion, it is of advantage to drain the omentum down behind the uterus, thus favoring the discharge of any

septic material through the lower angle of the wound. Drainage of the pelvic cavity can not be efficiently carried out. The abdominal wound must be concealed by a dressing made of snowy cotton dissolved in alcohol and ether, containing one part bichloride to 16,000. A little strip of gauze is laid over the wound saturated with this solution. This adheres until it is time to take the sutures out, concealing the wound, and preventing contamination from the outside much better than many layers of gauze and cotton. The baby should be allowed to nurse as soon as the mother has thoroughly recovered from the anaesthetic. The vagina should not be douched out as a matter of routine. The vaginal outlet should be secured from the introduction of sepsis from without by recarating the labia and throwing into the vulvar orifice a drachm of powdered iodoform and boric acid (1 to 7). A cotton pad loosely applied to the vulva should be changed as often as soiled by the discharges. The patient thus passes through a perfectly normal puerperium.

DR. CHAS. P. NOBLE: In the technique of the operation laid down by Dr. Kelly, reference has been made to typical cases. In such cases I agree entirely with what he has said. But all cases are not typical. I will report a unique case upon which I did the Cesarean section recently.

Dr. Kelly had operated in a previous pregnancy. As a result of the first operation there remained a fistula opening from the uterine cavity through the abdominal wall. Notwithstanding this fistula, she became pregnant, and for several weeks the amniotic bag protruded into the opening, so that there was nothing between the fetus and the outer world but the thin amniotic sac. This sac ruptured at the thirty-third week. The woman had a generally contracted pelvis; besides having a large mass of ec. tissue behind the cervix, left from her previous Cesarean labor. Had spontaneous labor been possible, the fetus would have escaped through the fistula and not per vaginam. In view of the conditions, I thought Cesarean section preferable to delivering the mutilated foetus *per vias naturales*. The finger was inserted into the uterus through the fistula, and with this as a guide the incision was made through the region of utero-abdominal. Sufficient room not being afforded for delivery, the peritoneal cavity was opened and the uterine incision lengthened. The living fetus was then delivered. The placenta and membranes were firmly adherent, and were slowly peeled off.

To control bleeding during this time it was necessary to insert the uterus through the abdominal incision—to enable the assistant to grasp the lower segment. The patient passed through a perfectly normal puerperium, and is now quite well, and soundly healed. This case is entirely unique in its conditions and in the technique of the operation.

Three cases of Cesarean section have been observed by me, all having made good recoveries. When the operation is done at the proper time, and after the method described by Dr. Kelly, I am sure this result will be quite uniform. The essentials of success are: 1. Operation at the proper time, before labor or at the beginning of labor; 2. Rapidity in operating; 3. Accurate suturing; 4. Asepsis.

With reference to suturing, I believe that the Lembert suture, as ordinarily described, is purely theoretical. The peritoneum will not hold a suture. Operators have unconsciously included the deeper tissues in the so-called Lembert suture. An important point, not generally recognized in this country, is, that the diagnosis should be made in the last weeks of pregnancy, and, under ordinary circumstances, the operation be decided upon and done at the close of pregnancy, before labor sets in or immediately thereafter. I would not do the modern Cesarean section in a case which had been tampered with by efforts to deliver with the forceps or by version; but in such cases would prefer the operation. In Philadelphia, in the last four years, twelve Cesarean sections have been done, and ten mothers have recovered. One that died had pneumonia at the time of the operation. The other case was one in which the surgeon at the same time removed a fibroid tumor.

DR. B. B. BROWNE: I think all the procedures recommended are in the main correct, and are in accordance with the rules and suggestions laid down five or six years ago by Garrigues, Saenger and Leopold; these should be carried out in ideal cases, but unfortunately we meet with many complications which must be dealt with as they occur. Having recently performed the operation myself and looked up the literature and technique of the subject, I was surprised to find that we can to-day make but little improvement or change for the better. In 1886 Saenger had operated four times, saving all the women and children. Dr. Leopold had operated nine times and lost one woman, saving all the children.

DR. T. A. ASHBY: I wish to congratulate Dr. Kelly on his brilliant success with the Cesarean section. This success

is convincing proof of what can be done when the section is instituted under proper conditions and at a proper time. The future of the operation rests upon a proper and judicious selection of the case, and upon an immediate resort to the section before other methods of delivery have been attempted and abandoned. I doubt whether the Cesarean section under such conditions will give a higher mortality than the ovariectomy of ten or fifteen years ago. The technique of the section is simple enough and certainly its mechanical execution is not as difficult as that necessitated in the removal of many conditions of tubal and ovarian disease. Hemorrhage is not large, and it is easily controlled. Septic processes should not follow if strict aseptic precautions are observed. The progress of the section as a substitute for other methods of delivery, rests upon an early and clear recognition of the pelvic measurements and a prompt acceptance of this method as the proper procedure in the given case. When this is done the success of the section is not compromised by unfortunate interferences in other directions. When we have obtained the statistics of this class of cases, we are in a position to compare the mortality of the section with other operative methods.

DR. W. P. CHUNN: I did not hear the first part of the history of the case, but I think I would have removed the ovaries or tied the Fallopian tubes to prevent future conception. It is hard to say just what operation should be done.

DR. NOBLE: In doing a Cesarean section I would not touch the ovaries and tubes as Dr. Chunn speaks of doing, but would do nothing to prolong the operation. Tying of the tubes would probably cause salpingitis. This objection is purely theoretical. So far as I know, this has been done only twice—once in England, and once in America.

DR. BRINTON: I have been for some years interested in measuring the pelves of women. Very often we go to labor cases without knowing anything about the condition of the pelvis. With the hospital surgeon who has the best facilities the Cesarean operation will undoubtedly be the best in cases of extreme pelvic contraction. But with the average practitioner what is best? I think, with these physicians, that craniotomy will hold the place. In speaking of craniotomy "holding its place," I referred to those cases of pelvic contraction where the child could be extracted without harm to the mother, say from $1\frac{3}{4}$ to 3 inches.

DR. T. A. ASHBY: I must offer an apology for presenting a series of experiences which are familiar to all who have done much intra-abdominal work. I have brought these charred remnants of tubal and ovarian inflammation before the society to invite discussion, not to exhibit anything original. They represent nearly every phase of intra-pelvic inflammation and illustrate the various degenerative conditions which are found in the pelvis after an inflammatory fire has passed over these tissues. Of the nine specimens here presented, removed from the same number of cases, no two are alike. In one case the tube has received the brunt of the attack, in another the ovary is involved in abscess cavities, whilst, in a third, both tube and ovary are tied up in a knot by adhesive inflammation, and so on through the series.

The clinical histories of these cases would be exceedingly interesting did time admit of a recital, but I shall not tax your patience with details. We have the same old story in all of these cases, save two—one the large specimen of a tubal sac of uncertain origin, probably an interrupted tubal pregnancy of long standing, and the other the remnants of a catarrhal salpingitis and ovaritis with intra-pelvic adhesions. Of the other seven specimens the origin of the condition is of chief interest in this connection since they explain to my mind the essential factor in the production of the specimen here presented. Each of these women have borne one or more children; in each case the history of the intra-pelvic trouble dates from the last lying-in period, which was accompanied with mild or severe symptoms of child-bed fever. In each of these women there was an old lacerated cervix, in some more pronounced than in others. The histories of these cases, as far as they can be made out, and can be interpreted, tell the simple story. During labor a cervical tear occurred, in this wound septic material gained a lodgment, a septic process was established which extended from the cervix to the cavity, from the cavity to the tubes, and from the tubes to the intra-pelvic peritoneum. The severity of the symptoms in each case must have borne some relation to the septic process and to the tissues involved, though no way is offered for verifying this statement. We simply find the results in general destruction of the tube or ovary, or of both, and the inference is that drainage was secured and pus escaped, leaving no remnants of this character behind, except in two of the specimens, in which I found pus cavities in the ovary containing each a drachm or more of pus. These

cases illustrate the fearful havoc which a septic process following parturition may occasion among the pelvic organs. A little fire kindleth a mighty conflagration is literally true in more respects than one. In an experience with other cases I have observed this septic process in its very beginning when limited to the cervix and cavity, and I have seen the lying-in woman's temperature fall from 103° to normal within twelve hours after thorough cleaning and disinfection of the cervix and cavity in these cases and a most complete arrest of the process before the tubes were involved. In another case I have seen tubal and general pelvis-peritonitis in active force following immediately the infection in the cervix and cavity. This experience convinces me, despite all other theoretical teachings, that we have in the lying-in state an explanation of those intra-pelvic diseases which render the lives of so many women useless and oftentimes utterly miserable. Now, is it necessary that the lying-in period should be surrounded with extra hazard, high temperature and severe pain? A septic endometritis following parturition may run a mild and low grade course, and still result in sub-involution, salpingitis, pelvic adhesions, and other intro-pelvic conditions which impair the normal function of these organs. The lesson clearly taught by such experience is that aseptic conditions should be enforced in every case of labor, that the least suspicion of sepsis should lead to immediate investigation of the uterine cervix and cavity with a view to thorough cleaning and arrest of the septic process. If this be done, as I have done it in a number of cases seen with medical friends in consultation, we can cut short a sepsis and arrest a condition which will surely extend to the tubes and pelvic peritoneum in the absence of prompt attention.

DR. B. B. BROWNE: The fact that laceration of the cervix is so frequently found in married women suffering from tubal disease is, I think, because the purulent discharge from the uterus passing over the torn surfaces prevents their union, while the septic material also extends to the tubes; when there is no septic material in the uterus the lacerated surfaces readily unite, and the tubes are not affected.

DR. J. WHITRIDGE WILLIAMS: The specimens exhibited represent a class of cases that are very common, and which will become more so as we become more expert in bimanual examination. Indeed, to a skillful palpator, it almost seems that the majority of women examined have more or less

tubal or ovarian disease. The specimens are particularly interesting to me because I have studied carefully the pathology of a large number of similar cases. The etiology in many cases is doubtful, but most observers appear to cling to Noegerrath's theory of latent gonorrhœa. Examination of the pus in cases of pyosalpinx brings forward most interesting facts. For in most cases it is impossible to discover any species of bacteria, either under the microscope, or by culture methods, which shows that the bacteria which caused the trouble have long since died, for closed pus cavities are not particularly favorable for the growth of organisms. In two cases we found undoubted gonococci, and in a case following an imperfect abortion, the streptococcus, and in another case the staphylococcus aureus. Clinically the cases due to the pus organisms are much more acute and virulent than those due to the gonococcus. These results correspond with those of Zweifel, of Leipzig, who has just published his observations. He also found the gono- and streptococcus, but not the staphylococcus. In one of his streptococcus cases, the subject was an undoubted virgin, and he accounted for the infection by an abscess following an attack of typhoid fever some years before.

Dr. Ashby speaks of the relation of lacerated cervix to salpingitis, etc. I can not consider it a factor in the production of the disease, and regard it merely as a coincidence. If it were a potent factor in producing the trouble, we should find salpingitis and pelvic adhesions far more frequently than we do now; for we must remember that in most women there is more or less laceration of the cervix during labor. Moreover, this cause is certainly inapplicable to the frequent cases occurring in milliparous women and especially in virgins. A close study of the clinical history of a number of cases inclines me to believe that the majority of cases follow infection during labor or after an incomplete abortion; for in many cases it is impossible to obtain even a history of leucorrhœa before the labor, which would apparently exclude gonorrhœal infection. By infection during childbirth, I do not necessarily mean the cases in which we have well-marked puerperal fever, but the milder degrees of infection as well; for most of the cases of so-called milk fever are due to infection and may give rise to sericus results.

Zweifel, on the contrary, who has just published a remarkable series of seventy-nine salpingo-oophorectomies, with only one death, believes in the gonorrhœal origin of most cases.

Saenger traces most of the cases in virgins back to a gonorrhœal salpingitis during childhood, which has persisted and ultimately affected the Fallopian tubes. While I do not feel justified in subscribing to this view, I can say that it is quite probable. For lately I have seen a number of cases of undoubted gonorrhœa in little girls of from two to seven years of age, in which there was no suspicion of criminal action. In eight cases of vaginitis in little girls which I have examined, I found gonococci in six of them. In several, the mode of infection was quite clear. In one case the husband acknowledged an attack of gonorrhœa with which he infected his wife during her pregnancy, and each of the children born after it had ophthalmia neonatorum, followed, when they were older, by gonorrhœal vaginitis. In another case, an older brother had gonorrhœa and his two little sisters used his towels for bathing. These remarks will show that the vaginitis of little children is not of strumous origin, as generally supposed, and that it demands a more active treatment than is generally employed; especially when we consider its possible consequences.

DR. BRINTON: I can corroborate the views of Dr. Williams in regard to the specific origin of the cases of vaginitis in children. Having recently treated, first, the father with gonorrhœa, later the mother, and within a fortnight from the time the father consulted me, was called to see the little daughter, aged four, with a severe "vaginitis" which yielded to the usual treatment in about the usual time, my experience has been that if a child is found with a "vaginitis" close investigation will prove that some older member of the family has either a "urethral" or "vaginal" discharge.

DR. NOBLE: Dr. Ashby has brought up so many points that it is difficult to know just what to take up. It is now the fashion to call all unilateral collections of blood extra-uterine pregnancies. But I have recently had a case that proved not to be a pregnancy. With reference to the uterine hemorrhage coming from the tubes, we do know as a fact that it is possible for blood to come from the tubes. This was common to all in the days when the stump was treated by the extra-peritoneal methods, in doing ovariectomy. I am quite sure that gonorrhœa has been the cause of most of the cases of pyosalpinx that I have seen. And I think that the cause of salpingitis in young women is often some simple infection. Many cases of dysmenorrhœa in young women are due to salpingitis. In such cases it is unneces-

sary to question their chastity. I agree with all the speakers in reference to the relation of lacerated cervix to salpingitis. Where there is a laceration there is frequently an endometritis and there is no reason to think that it may not follow out into the tube. I believe firmly in the great value of the drainage tube; and use it in almost every case. When properly cared for, it is practically free from objection, while being of most positive advantage in allowing the escape of serum and blood.

DR. H. P. C. WILSON: I did an exploratory laparotomy for a fibro-cystic tumor. In manipulation I found great tendency to bleeding, and as I could not get at the ovaries nor remove the tumor without causing death, I closed the abdomen. She got on well for fourteen hours, when she became very feeble, heart and respiration very weak. She was put upon digitalis and muriate of quinine and urea, but it did no good. The heart became so weak that the pulse could not be felt. I then began with five minims of tincture of strophonthus every three hours, and ether M xx $\frac{3}{4}$ hypodermically every three hours. The pulse became stronger, 125 to the minute, and she felt better. The next day she became unconscious, pupils dilated, face flushed, pulse 120, temperature normal. The medicine was withdrawn, but she remained in this condition about twenty-four hours. To-day she is better, consciousness returning, pupils contracting. I have had no experience with the poisonous effects of strophonthus.

Gleanings.

WILL give you a report of a case for which I used Ponca Compound:

"Patient, female, thirty-three years of age, married, mother of three children, pregnant with the fourth for three months, has to work hard for a living. When she called on me she complained of terrible bearing-down pains, cramps in the bowels, indigestion and great weakness. On examination found a copious flow of a white, greenish liquid, from which she told me she had suffered for years. I prescribed the usual remedies, which, while they relieved the leucorrhœa somewhat, did not produce the desired result, especially as her occupation and means precluded a restful life for any given time. Ponca Com-

pound having been recently called to my attention, I was struck by its evident application to the conditions of this case and gave the patient fifty tablets, with instructions to take one after each meal and one at bedtime, and report to me when she had taken all of them. In about two weeks' time I saw the patient and was more than surprised to find the leucorrhœa entirely gone. She informed me that her pains had disappeared, her appetite had improved and her bowels had moved regularly every morning. She said her womb had grown firmer, in fact, it gave her no trouble, and she did not know she had such a thing; furthermore, she had been able to attend to her usual occupations without any difficulty. She desired a prescription for the same remedy, which I gave her, and she left me to all appearances a new woman.

"One thing I must mention. Ponca Compound seems to affect the appetite, improving it considerably, and also to a greater or lesser extent overcomes constipation.

"O. GAY, M.D., 942 Parker St., Boston, Mass."

WHOOPIING-COUGH.—One of our exchanges states that Baumel uses a mixture which also acts favorably upon the catarrhal condition:

R_y—Ext. belladonnæ, gr. j
Syrup. toltan, ʒiv

M. Sig.: Three to four coffeespoonfuls for a child one year old.

Talamon prescribes:

R_y—Terpine, gr. xv
Antipyrin, gr. xv
Syrup. aurant, ʒj-ʒvj
Mucilaginis, ʒij

M. Sig.: One or two teaspoonfuls several times a day for a child under four years.

For use at the time of the paroxysm, Wilde recommends the following mixture, a teaspoonful of which is to be poured upon a compress and held close to the child's mouth:

R_y—Chloroformi, ʒj
Æther. sulphuric. purif, ʒij
Ess. terebinthenæ rect, ʒiiss

M.

—*St. Louis Med. and Surg. Journal.*

HYDRASTININE IN MENSTRUAL HEMORRHAGE.—Falk has found that hydrastinine is very effective in congestive dysmenorrhœa, menstrual hemorrhages due to a change in the texture of the uterus, in metrorrhagia due to endometritis, in myoma, etc. He orders the following:

R_x—Hydrastinini muriat, . . . gr. $\frac{3}{4}$
 Ext. glycirrhizæ, . . . q. s.
 Ft. tal. pil. No. 10.

Sig. : Take one or two pills daily.

One pill should be taken a few days before the hemorrhage begins, and two while it continues.

—*St. Louis Med. and Surg. Journal.*

ACUTE RHEUMATIC ATTACKS.—Dr. William Henry Porter says (*Medical News*) that for acute rheumatic attacks nothing relieves so quickly and effectually as free mercurial purgation followed by salicylic acid or the salicylate of sodium. He prefers the following formula :

R_x—Salicylic acid, . . . ʒiij
 Sodium bicarbonate, . . . ʒij
 Elixir of gaultheria, . . . ʒi
 Glycerin, . . . ʒss
 Water sufficient to make . . . ʒiv

M. S. : Dose, one fluidrachm every hour.

The salicylates should be given hourly until their full effects are produced, then the interval between the doses should be lengthened from two to three or more hours, as may be required.

—*St. Louis Med. and Surg. Journal.*

Microscopy.

CONCERNING RACES AMONG BACTERIA.—M. C. Gessard, in his work on biological chemistry, at the Sarbonne and Pasteur's Institute, Paris, established that the *pyocyanic bacillus*, in its chromogenic function, produced a variety of pigments according to differences in the composition of various culture media. His first investigations were made with a micro-organism isolated from the dressing of a wound. Afterwards he studied the functions of two other organisms of different origin. In the course of these studies, Mr. Gessard investigated the measure, constancy and the question of necessity of relation between microbe

and medium in the production of pigment; if these relations could extend to other germs of whatever source; if exceptions could not spontaneously occur; or if forms could be provoked artificially and perpetuate themselves afterwards by way of generation. In other words, he asked himself the question, Can there be different races of the *pyocyanic bacillus*?

The idea of races among micro-organisms of the same species was introduced by Pasteur during his study of alcoholic fermentation as far back as 1862. He demonstrated the distinction between "high" and "low" yeast of breweries, probably originating from a unique germ, "illustrating a new example of those modifications of plants and animals which have become hereditary by a prolonged domestication."

Mr. Gessard has concluded from his investigations—and his conclusions are sustained by the careful experimentation of Wasserzug—that races are established among germs. Both of these scientists have seen that these functions of pyocanic bacilli and other germs may be modified, altered, changed in such a marked degree as to render their identification with the primitive parent organism difficult without a long series of cultures in various conditions and media. Indeed, we have seen ourselves that even the forms may be changed by surroundings and nourishment.

A same species, in course of development and successive generations, may, according to variation of external influences, nutrition and medium of existence, produce a number of germs different in physiological functions, and sometimes slightly in morphology. These altered organisms may be afterward cultivated and preserved with the *acquired* modification, seemingly by hereditary transmission. These microbes, with different attributes, coming from an original common parent, are true races, and the knowledge of the process of evolution in producing the alterations—a process that the eye can follow clearly, down the scale of degeneration or upward to a higher physiological condition, perhaps—offers much food for reflection concerning the evolution of higher species in the animal and vegetable kingdoms. The truth of the profound changes produced gradually in a given organism by the surroundings, climate, medium of existence, food, etc., which eventually become physiological characters susceptible of reproduction in descendants, are apparent to all observers; but here are little individual

unicellular organisms as full of life as more complex beings, in which we can follow the evolution step by step with the eye.

When we consider that a microbe is thus a unique cell in which life is centered, and that a larger organism—man, say—is an aggregation of physiologically related cells, individually endowed with life as the single micro-organism is, we grasp the application of appreciable microbic evolutionary phenomena to more highly organized beings. Are not, in fact, unicellular and multicellular beings closely related physiologically?

From a single kind of bacteria, viz., the *pyocyanic bacillus*, taken in the dressing of a wound, Mr. Gessard produced, in a series of cultures in different media, carried on successively more than one year, four different races, with the following properties:

SPECIES, <i>Bacillus</i> <i>Pyocyanic</i>	RACES.	{	A, giving pyocyanine and fluorescence.
			B, giving only pyocy- anine.
			C, giving fluorescence only.
			D, no fluorescence nor pyocyanine.
			— <i>The Bacteriological World.</i>

VACCINATION AGAINST DIPHTHERIA.—Mr. Fraenkel, following his researches on the poison of diphtheria, made jointly with Mr. Brieger, has been seeking a mode of vaccination by means of attenuated cultures, and by the use of the toxic products of the microbe of diphtheria.

The best results were obtained with a liquid culture heated an hour at 149° to 158° F. About ten cc. of such a culture, aged three weeks and treated as we have said, confers immunity against subsequent inoculation of the most virulent virus, on condition that the latter be not practiced sooner than fourteen days after vaccination.

When we reflect a moment on the fearfully toxic properties of the product of this bacillus; the fact that it lives chiefly on the mucous membrane, whence the poison generated is introduced into the circulation; that this poisonous matter is the greatest factor in causing pathological phenomena and death, we must admit that vaccination against diphtheria is a most difficult problem to solve. Still, some day, doubtless, diphtheria will be prevented some way.
—*The Bacteriological World*.

Book Notices

SURGERY. A PRACTICAL TREATISE, WITH SPECIAL REFERENCE TO TREATMENT. By C. W. Mansell Moullin, M.A., M.D., Oxon, Fellow of the Royal College of Surgeons; Surgeon and Lecturer on Physiology to the London Hospital, etc. Assisted by Various Writers on Special Subjects. With 500 Illustrations, two hundred of which have been made for this Work from special drawings. 8vo. Pp. 1,180. Cloth. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price \$7.

This work constitutes a large and ponderous volume, containing very nearly 1,200 pages. The scope and object of it will be best set forth by making a quotation from the author's preface, as follows:

"Modern surgery has advanced with such rapid strides, and in so many different directions, that it is almost impossible, within the space of a single volume, to give more than an epitome of its main principles. I have heretofore touched but lightly upon controversial matters, and have endeavored to make this book a practical one, in the hope that it may be of greater service to students and general practitioners. With this object, I have given special attention to treatment; and I have included under the head of each organ a brief description of the malformations to which it is liable, and the various operations that may be performed upon it, instead of relegating them to chapters by themselves. The General Pathology of Surgical Diseases is dealt with in Part I.; that of Injuries in Part II. In Part III. the Diseases and Injuries of Special Structures and Organs are considered more fully. Throughout I have endeavored to enforce the idea that the chief aim and object of surgery at the present day is to assist the tissues in every possible way in their struggle against disease."

Assuredly, as the author states, rapid strides—and also changes—are taking place in surgery. In the surgeries of only a few years back the word "sapræmia" could not be found. If a surgical student of to-day should limit his reading to text-books upon surgery published twelve or fifteen years ago, he would find to his astonishment that he was so ignorant of the technical nomenclature employed at the present time in discussing the etiology, symptoms, etc.,

of surgical affections, that he would scarcely be able to understand the papers brought to his attention in the medical journals. While, of course, the classical work upon surgery of the distinguished Professor Gross continues to be of great value as an authority and a work of reference to surgeons in active practice, yet we do not think that a teacher would recommend it to his students as a text-book from which to learn surgery.

The work of Dr. Moullin (though an English surgeon, he seems to be an M.D.) is an entirely new work upon surgery, and not a reprint or new edition of a previous publication. As we have stated, it forms a very large volume; but to constitute a complete or exhaustive treatise it could not have been made of less size. If the author had indulged, to any extent, in discussions of subjects on which various opinions have been expressed, the volume would have been expanded to a much greater size, or made into two volumes; but he has limited his treatment of subjects to such as the profession are agreed upon in their views. We have no doubt but that students and practitioners will hold the work in high esteem.

PRACTICAL NOTES ON URINARY ANALYSIS. By William B. Canfield, A.M., M.D., Chief of Chest Clinic, and Lecturer on Clinical Medicine, University of Maryland; Visiting Physician to the Union Protestant Infirmary, Bay View Hospital, Baltimore, etc. 14mo. Pp. 93. Paper. Detroit: George S. Davis. Price 25 cents.

Urinary pathology has gotten to be an important branch of medicine. So much so, in fact, that a physician who is not informed in regard to it is not considered a competent physician.

But the analysis of the urine has reached such a degree of refinement that it requires a skilled chemist to master it in all of its detail. But there are many manipulations which afford important information which any intelligent medical man can learn to perform, if not living in a populous region where chemists abound, and he is thrown upon his own resources.

The object of this little work is to point out the tried and reliable tests for detecting normal and abnormal substances in the urine, and to exhibit errors that may creep in in such an undertaking, and to guard against certain mistakes by

clearly stating the important and carefully avoiding the superfluous.

The work belongs to the series of publications issued at Detroit by Mr. George A. Davis, entitled *The Physician's Leisure Library*.

- A TREATISE ON THE DISEASES OF THE NERVOUS SYSTEM.
By William A. Hammond, M. D., Surgeon-General U. S. Army (retired list); late Professor of Diseases of the Mind and Nervous System in the College of Physicians and Surgeons of New York, the Bellevue Hospital Medical College, the University of the City of New York, etc. With the Collaboration of Græme M. Hammond, M. D., Professor of Diseases of the Mind and Nervous System in the New York Post-Graduate Medical School and Hospital; Member of the American Neurological Association, etc. With 118 Illustrations. Ninth Edition. With corrections and additions. "Est quoddam prodire tenus, si non datur ultra."—*Horace*. 8vo. Pp. 932. Cloth. New York: D. Appleton & Co. Cincinnati: R. Clarke & Co. Cloth, price, \$5.00.

This is the ninth edition of the author's "Treatise on Diseases of the Nervous System." Certainly he has reason to feel highly flattered by the fact that there has been a call for so many editions. For a medical work to reach a ninth edition is very unusual. There can be no stronger evidence that the profession appreciates and approves the labors of the author; and if it should happen to be found that he felt somewhat vain in consequence, no doubt there would be a disposition to excuse him. But, besides having passed through so many editions, the work has been translated into the French, Italian and Spanish languages.

The author, after describing the instruments and apparatus employed in the diagnosis and treatment of diseases of the nervous system, then proceeds to discuss the organic affections of the nervous system. He first considers the pathology of the diseases of the brain, as cerebral congestion, cerebral anemia, cerebral hemorrhage, cerebral meningeal hemorrhage, cerebral softening, etc. He next takes up the consideration of the pathology of the affections of the spinal cord, as spinal congestion, spinal anemia, spinal meningitis, inflammation of the cord, tumors of the spinal cord, etc.

His third division embraces the treatment of such diseases as hydrophobia, epilepsy, chorea, hysteroid affections, etc. Then follow descriptions and discussions of the diseases of the peripheral nervous system, diseases of the sympathetic nervous system, certain obscure diseases of the nervous system, toxic diseases of the nervous system.

Dr. Hammond treats the various subjects which he considers, in a clear, thorough, methodical manner. He has long been a close student and observer of nervous diseases, and his knowledge of them is as complete as the results of modern investigations permit. Possessing an active, trained, logical mind, he is rarely qualified in studying the phenomena of the nervous system (a most interesting subject), to readily perceive their relations to one another with reference to cause and effect—to discriminate between diseases and symptoms.

Great advances have been made within a few years in our knowledge of the physiology and pathology of the nervous system. The microscope, ophthalmoscope, and other instruments of precision of recent discovery, have added most wonderfully to our information of the causes of nervous phenomena. Much that was formerly obscure has been made plain; and still further developments are being constantly made. The work of Dr. Hammond has brought the subject fully abreast of the times, so that the physician in studying it can feel assured that its teachings are in harmony with the most recent investigations.

In treating locomotor ataxia, Dr. Hammond says: "In the former editions of this work I described locomotor ataxia under the designation—based upon its patho-anatomy as then understood—of posterior spinal sclerosis. The recent investigations of Charcot and his pupils have, however, shown that the morbid process which gives rise to the remarkable group of symptoms known as locomotor ataxia is in reality situated in the subdivisions of the posterior columns, lying between the columns of Goll and the posterior horns of gray matter, and called the posterior root-zones. In accordance, therefore, with its exact morbid anatomy, *tabes dorsalis* should be designated by the term placed at the head of this section (Inflammation—sclerosis—of the posterior root-zones of the spinal cord). But, for convenience, I shall generally use the name locomotor ataxia, and no confusion can arise from this course, so long as we bear in mind the

relation which it bears to the more exact pathological designation."

Dr. Hammond describes a number of queer symptoms which he has noticed in some cases of *tabes dorsalis*. In rather more than half the cases that have come under his observation, the transmission of sensitive impressions to the brain does not take place with the normal degree of activity. "In a lady a pin stuck into the calf of the leg is not felt for fourteen seconds on the right side and sixteen on the left. In a gentleman having the disease, if the feet were put into hot water the sensation was not felt for almost three minutes. As he said, 'My feet might be scalded till the flesh dropped off and I would not know it till the mischief was done. Then I should feel it sharply.' The explanation of this symptom is to be found in the fact that the conducting power of the posterior columns is lessened by the lesion, and hence the brain does not receive in the usual time the impressions made upon the nerves."

MATERIA MEDICA AND THERAPEUTICS. WITH ESPECIAL REFERENCE TO THE CLINICAL APPLICATION OF DRUGS. By John V. Shoemaker, A.M., M.D., Professor of Materia Medica, Pharmacology, Therapeutics and Clinical Medicine, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital, etc. Volume II. of a Treatise on Materia Medica, Pharmacology and Therapeutics. Being an Independent Volume upon Drugs. 8vo. Pp. 665. Cloth. Philadelphia: F. A. Davis [1231 Filbert St.]. Price \$3.50.

The first volume of this work was issued some time ago, and was devoted to pharmacy, general pharmacology and therapeutics, and remedial agents not properly classed with drugs. It constituted a volume of about 353 pages. The two volumes are sold separately; for though connected, yet they may be considered as forming distinct works, the subjects considered in the first volume having been fully treated.

The author states that it has been his aim to render this volume a complete, as well as practical, exposition of the pharmacological, physiological and therapeutical action of the various drugs now used in medicine. He says that though a writer may speak *with conviction* of remedies and methods which, in his own experience, have proved of ad-

vantage, he should not lose sight of the fact that, for one reason or another, the practitioner is not infrequently disappointed in the action of the most approved medicaments. How frequently is it announced that a certain medicine has been discovered possessing almost specific properties in the treatment of this or that affection, and cases reported in which remarkable cures seemed to have been brought about by its action. The flattering commendations, too, of a supposed remedy often will not be from just one physician, but from many; sometimes, seemingly, from half of the profession. But after some months, or a year or so, there will not be found a single practitioner using it—all having lost confidence in the virtues which they believed it possessed, and which they had so highly lauded. We have proof, therefore, very frequently, that a writer may speak *with conviction* of remedies and methods which, in his own experience, at some time, have proved of advantage, but for one reason or another, at another time, have disappointed him.

The author very correctly states that classification in materia medica is very difficult. If, for instance, a medicine be described as a diuretic, we are often obliged to admit that it might be no less properly placed among the cathartics or diaphoretics. No classification of remedies, therefore, has permanently endured. Nearly every writer on materia medica constructs a classification to suit himself, as is convenient for his purposes. However, all works treating of remedial agents recognize such divisions as purgatives, emetics, anthelmintics, emmenagogues, stimulants, diaphoretics, disinfectants, astringents, narcotics, etc. There are some volumes, like the United States Dispensatory, devoted to the consideration of remedial agents and their preparations, which treat of the different articles in alphabetical order. The work before us, also, after considering the classification of drugs according to their effects upon the human system in an introduction, sets out in the discussion of each one in alphabetical order.

Dr. Shoemaker's work has a number of characteristics which will recommend it to students and practitioners, and will increase its value. It includes every officinal drug and every preparation contained in the United States Pharmacopeia; it combines with officinal drugs the most reliable reports of the actions and uses of all the noteworthy new remedies, such as acetanilide, antipyrin, bromoform, exalgine, pyoctanin, pyridine, somnal, tuberculine (Koch's

lymph), sulphonah, thiol, urethan, etc.; it is an epitome of the present state of American medical practice, which is universally acknowledged to be the best practice.

The author has endeavored to bring his description of drugs and their applications fully up to the date of publication. There will be found, consequently, in the work as full a treatment of the latest remedies brought to the attention of the profession, such as Koch's lymph and many other articles, as experience with their effects will permit.

There is no doubt but that the work will rank with the very best of those belonging to the same department of medicine.

QUIZ COMPENDS. No. 7. A Compend of Gynecology. By Henry Morris, M.D., Late Demonstrator of Obstetrics and Diseases of Women and Children in the Jefferson Medical College, etc. With Forty-five Illustrations. 16mo. Pp. 178. Cloth. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price, \$1.00.

These compends are compiled in accordance with the latest teachings of prominent lecturers and the most popular text-books. They form a most complete, practical and exhaustive set of manuals, containing information nowhere else collected in such a condensed, practical shape. Thoroughly up to the times in every respect, containing many new prescriptions and formulæ, and over two hundred and fifty illustrations, many of which have been drawn and engraved specially for this series.

This little work consists to a great extent of the course of instruction which the author gave to his laboratory class in Jefferson Medical College. He has endeavored to make it as practical as possible, in the hope that it may prove useful to the beginner, and to the physician who, from a want of constant practice in gynecology, may, when called upon to make an examination, be at a loss as to the best methods of procedure, or puzzled as to the significance of what is found by him.

INTERNATIONAL CLINICS: A QUARTERLY OF CLINICAL LECTURES ON MEDICINE, SURGERY, GYNECOLOGY, PEDIATRICS, NEUROLOGY, DERMATOLOGY, LARYNGOLOGY, OPHTHALMOLOGY AND OTOTOLOGY. By Professors and Lecturers in the Leading Medical Colleges of the United States, Great Britain and Canada; Edited by John M. Keating, M.D., Philadelphia, Editor "Cyclopedia of the Diseases of Children"; J. P. C. Griffith, M.D., Philadelphia, Professor of Clinical Medicine in Philadelphia Polyclinic; J. Mitchell Bruce, M.D., F.R.C.P., London, Lecturer in Charing Cross Hospital; David W. Finlay, M.D., F.R.C.P., Lecturer in Middlesex Hospital. April, 1891. Cloth. 8vo. Pp. 357. Philadelphia: J. B. Lippincott Company.

This work proposes to be a quarterly collection of the best and most practical and useful clinical lectures delivered at the leading medical colleges of the United States, Great Britain, and Canada. These lectures, after having been reported by competent medical stenographers, are put into correct form by the editors and returned for revision and correction to the professors and lecturers themselves. It will be the aim to give the profession the very cream of practical medicine and the most recent phases of clinical instruction.

The work will be issued quarterly, and each volume will embrace about 350 pages, octavo, printed from new, clear type on good paper, and bound neatly in cloth and half leather.

For full particulars in regard to the publication we advise our readers to write to the publishers in Philadelphia for an announcement, which will contain terms, the names of contributors, etc.

Editorial.

TEACHING THE DEAF HOW TO SPEAK.—Some time ago we were informed that "deaf and dumb" children could be taught to speak through the eye—by closely watching the muscular action visible in the organs of speech of persons engaged in talking, and then imitating it. We had previously heard of persons having the ability to understand what an individual was saying, when talking, by intently observing the motion of his lips, which we understood was called "lip-reading," but not until comparatively recently

were we informed that a "mute," after learning "lip-reading," could, by imitating the movements observed in it, give utterance towards, and express his thoughts. But it seems to us that speaking involves much more than moving the lips; for in order to speak words the breath must be forced along the trachea through the larynx, and the vocal chords made to vibrate—made to vibrate in a manner adapted to the expression of each word. But if it has been demonstrated, as we are informed, that mutes can be taught language—to speak—by first learning "lip-reading," any process of reasoning to the contrary falls to the ground. The fact must be accepted whether it seems reasonable or not.

We are informed that a number of "pure oral schools" for instructing those born deaf have been organized in the United States. It is said to be necessary for the complete success of the method, that deaf children should be guided and trained to speech from the age when hearing children begin to learn to talk.

It is stated in an exchange that a Miss Fuller, principal of the Horace Mann Day School for the Deaf (pure oral), Boston, established, two years ago, a home for the training in speech of deaf children before they are of school age. The necessary funds for commencing the good work in New England were raised by the mother of a successfully trained deaf child. The children are, of course, under the care of persons specially trained for that purpose, and their progress already gives great encouragement.

We see it stated that it is proposed to establish soon in the "Middle States" (whether or not in these are included the States which were classed as "Middle States" in the old geographies that we studied, when a boy, we do not know) such a home as Miss Fuller has established, and the public are earnestly requested to contribute to the endowment fund that will be required. It is to be under the management of Miss Emma Garrett, recently principal of the Pennsylvania Oral School for the Deaf.

PERSONAL.—We learn from the *Philadelphia Reporter*, April 25, that Dr. Da Costa has resigned the Chair of Practice of Medicine in the Jefferson Medical College. The cause does not seem to be ascribed to "failing health," but to enable the professor "to withdraw from the cares and burdens of the professorial position in order to have more leisure for his large practice."

For twenty-seven years, says the *Reporter*, in one capacity or another, Dr. Da Costa has been identified with the Jefferson Medical College, and it is not too much to say that its present exalted position is in a large measure due to the admirable manner in which he fulfilled the duties of his position, and to the luster of his reputation, which has so effectively supplemented that of Meigs, Gross, Pancoast and others, whose students respected and loved them, and who were justly esteemed and honored by the members of our profession all over the world.

With the issue of April 25th, Dr. Charles W. Dulles, who has been the sole editor and publisher of the *Philadelphia Medical and Surgical Reporter* for about four years, severed his connection with that journal. In an editorial *Farewell* he says: "To all—in city, town and country—and to my editorial colleagues throughout the land, from whom I have always received courteous treatment, as editor of the *Reporter*, I now say, Farewell."

Dr. Dulles, during his four years' management of the *Reporter*, discharged the duties devolving upon him with great credit. The journal was never edited with more ability nor ever maintained a higher position than during the time of his administration. There will follow him to other fields of duty the best wishes for his happiness and success of those who, while he was a journalist, were his editorial *confreres*; and undoubtedly the very warm interest which he states he feels in the welfare of the thousands of readers of the *Reporter* while its editor, will be entertained by them for him.

THE CLOSING DOOR OF QUACKERY.—This is the heading of an article in the May number of the *North American Review*, by William G. Eggleston, M.D., who says that since the organization of the first State Government on American soil the door of quackery has stood open, and the ignorant and poor have been at the mercy of designing and unscrupulous men calling themselves doctors. The first laws passed in this country, he asserts, were too rigid, as a rule, and could not be enforced, and scarcely anything was done to protect the health, lives and property of the people against these people until fifteen years ago.

Dr. Eggleston states that forty-one States and Territories now have laws in regard to the regulation of the practice of medicine—forty of these laws having been passed since January 1, 1875. Some of these laws are now inoperative,

and, if operative, would be inefficient. The States that have no laws for regulating the practice of medicine are Kansas, Maine, Massachusetts, Rhode Island; Utah has no law, and the Creek Nation in the Indian Territory has no law. The existing laws are entirely or practically inoperative in Arkansas, the District of Columbia, Maryland, Ohio, and Texas.

In many of the States and Territories the law requires a person wishing to practice medicine to register his diploma in a county clerk's office. But such a law is obviously inefficient, says Dr. Eggleston, "because a fraudulent diploma can be registered under it. So with regard to laws requiring that the diploma recorded shall be that of a 'legally-chartered' medical college. Some of the worst and most fraudulent colleges that have existed in this country were 'legally chartered.'"

The total number of medical colleges embraced in the new report of the Illinois Board is 316, of which there are or have been in the United States 294 and in Canada twenty-two. Of the 316, the total of the extinct schools is 168, of which 159 were in the United States and nine in Canada. There are now 135 medical schools in the United States and thirteen in Canada. Of the 159 extinct schools of the United States, twenty-three were fraudulent. There are now in existence twelve colleges or institutions known to be fraudulent—simply diploma mills. One each of these is in New Hampshire, New Jersey, and Washington; two in New York, three in Vermont and four in Ohio; and there is another in Ohio that may as well be classed as fraudulent.

We learn from Dr. Eggleston that before the session of 1883-84 there were but forty-five medical colleges in this country that exacted educational qualifications as a requirement for matriculation; now there are 129. Before 1883-84 twenty-two colleges required attendance on three or more courses of lectures; the number is now eighty-five. In the near future the figures will be still better. So many colleges have made provision for three courses of lectures, four years' study and three courses of lectures, or four courses of lectures, that there are now but twenty-one colleges that require only two courses and have made no provision for longer study. "It may be predicted that in five years every college in this country will have adopted the requirement of four years' study and three years' courses of lectures. What has been done is the result, mainly, of the

work of the various examining boards, which now control the recognition of diplomas in an area containing about 41,000,000 people."

Dr. Eggleston considers that the chief defects in the American system of medical education are: "1. Too little preliminary education, from which comes a lack of ability to grasp scientific principles. 2. Too much didactic work by the teachers. 3. Too little practical and clinical work by the students. 4. Too few tests of practical work. 5. Too short a time of actual work and study. Increasing the preliminary requirements and lengthening the time of study will remedy the other defects; and the application of the remedy will kill off the useless and low-class colleges." In Minnesota, Montana and Washington every candidate for examination and license must have attended three courses of lectures. The same will be required by the California boards after April 1, 1891; by the Colorado Board after July 1, 1893; in Illinois and Iowa after the session of 1890-91, and by the boards of examiners of New York after September 1, 1891.

The Illinois report shows that the General Medical Council of Great Britain and Ireland has decreed that every medical student beginning his medical studies after January 1, 1892, must be engaged in the study of medicine for five years. Graduates in arts and science of any university recognized by the Medical Council, who shall have spent a year in the study of physics, chemistry and biology, and have passed an examination in these subjects for the degrees in question, should be held to have completed the first of the five years of medical study. The Council will require that the fifth year be devoted to clinical work in one or more hospitals or dispensaries.

Both in Europe and in the South American republics, says Dr. Eggleston, medical education and the right to practice are on a higher plane than in this country; and yet, we have no hesitation in asserting that the physicians of the United States, take them as a whole, are better practitioners than are those of either Europe or South America. Professor Zenn, of Milwaukee, when in Germany a year or more ago, in a letter to a home journal, stated that while seven years' study of medicine was required in Germany for graduation, yet there was no drilling by daily examinations while in attendance upon medical lectures, as in this country, and consequently there was no incentive to study.

Students spent a large part of their time in beer gardens, at horse races, the theaters, etc. The only examination to which they were subject was when they were examined for graduation at the end of their seven years' term of study. American students, on the contrary, are "quizzed" daily on every branch of medicine, upon which they hear lectures, from the time they enter college until their course of lectures are completed. Probably Dr. Eggleston, when he wrote his article, was not aware of the inferior methods of training in the study of medicine which prevail in Germany, compared to those which exist in the United States.

Dr. Eggleston concludes his interesting article with the statement that the door of quackery in this country is being closed, not by the voluntary action of the colleges, but by wise legislation in the interests of the people.

ANNUAL REPORT OF THE CINCINNATI SANITARIUM.—We have received the *seventeenth* annual report of the Superintendent, Orpheus Everts, M.D., of the Cincinnati Sanitarium. The past year seems to have been a very prosperous one with the institution. At the beginning of the year, December 1, 1889, there were sixty-three patients in the house. During the year 183 were admitted. Since the previous report, therefore, 246 inmates received treatment.

Dr. Everts states, under the head of "Memorabilia," that for nearly one-half of the year the demand for hospital accommodation was greater than could be supplied. If all had been admitted that made application, the "daily average" would have been much greater. The Doctor, therefore, for "economic and professional reasons," suggests an increase in the capacity of the Sanitarium.

The report of Dr. Everts treats a number of subjects in a very interesting manner, so much so that we would be pleased to copy some of his remarks upon some of them quite fully, but we have not the room to spare. It has been thought by some that la grippe has been a prolific cause of insanity, but the Doctor does not seem to think so. He is of the opinion that the ascription of it as a cause of mental derangement arises from the habit of professional men and others being content to trace the origin of disordered mental phenomena in an individual to some single prominent cause, failing to recognize the action of a multitude of less obtrusive agencies. "If a single cause, or process of disease," says Dr. Everts, "to which insanity is confidently

ascribed is capable, alone, of effecting mental disorder, we should expect such a result to obtain as a uniform sequence of such causes. But the fact is, but few persons suffering any of the many forms of disease catalogued as 'causes of insanity,' no matter how severely, become insane. There must be, then, in every instance of insanity, a coöperation of causes more or less numerous." But the Doctor seems to think that the most important factor in the causation of insanity is in a constitutional proclivity to it, which he terms a "potentiality of insanity resident in the cerebral organization." We are disposed to agree with him; for we believe that no one ever became insane unless he possesses some *vice*, either inherited or acquired, of the nervous system—of the gray matter of the cerebral lobes.

Dr. Everts does not assent to the opinion of very many persons—professional and lay—that drunkenness is a disease. He admits that a man is in a state of physical disorder when intoxicated; that the condition of living organism affected by continuous, or often repeated, intoxication is either that of morphological deterioration, or arrested activity of functional capability; that the longevity of inebriates, as a class, is much abbreviated. But these admissions, he says, "do not embrace the confession of faith of a modern school of neuropathic doctors, who ascribe all of the antecedent conditions of which inebriety is inevitably sequential to congenital or acquired disease. That such antecedent conditions—natural proclivities to vice—the weakness or instability of character that yields to present influences, and adopts the manners and practices of associates without respect to consequences, is disease, or the result of disease, I do not admit. As well assert that all the vices incidental to inherent predisposition to depravity of conduct, neglected education, enforced associations, etc., that result in practices that provoke disease, are themselves manifestations of disease." He does not believe that the extreme views of "neuropathic doctors" of the irresponsibility of drunkards will ever be generally accepted.

While we do not believe that drunkenness should ever be accepted as an excuse for crime, yet we believe that it is sometimes a disease to the extent that the drunkard can not, by his own efforts, free himself from the chains of the vice by which he has become bound by long-continued indulgence in alcoholic liquors. If we had the space, we would substantiate our view, but we have not at this time.

Besides the interesting discussions of a number of subjects of interest to the profession and to intelligent persons generally, the report contains the usual tables found in such papers. Of the 246 patients who received more or less treatment during the year, eighty-one were discharged as cured; forty-seven as improved; forty-one not improved; ten died. At the date of the report thirty-three men and thirty-two women remain in the Sanitarium as patients.

We judge from the report that the Sanitarium is doing a good work, and is worthy of the confidence of the community.

When the Trustees come to enlarge the institution, we suggest that they establish telephonic connection with the city. This is a matter that should not be neglected. We also advise that there be placed in the institution not less than two large, first-class elevators, each one running from the first floor to the highest floor.

HYSTERICAL CONVULSIONS.—Dr. R. M. Powers, of Lundy's Lane, Pa., writes that in a case of hysterical convulsions, he had used Peacock's Bromides with complete success. He considers it an excellent preparation, and recommends its use.

"COCA" has maintained its reputation as a powerful nerve stimulant, being used with good results in nervous debility, opium and alcohol habit, etc. The highly variable character of the commercial drug makes it uncertain, however. ROBINSON'S WINE COCA we believe to be a uniformly active article, it being prepared from assayed leaves, the percentage of cocaine being always determined by careful *assay*.

KOCH'S REMEDY.—The efficacy of Koch's remedy seems to be still undetermined. At a recent meeting of a branch of the British Medical Association, Dr. Bristowe, author of Bristowe's Practice of Medicine, very emphatically expressed his disbelief in its beneficial properties. He said that infective diseases might be roughly divided into two classes: 1. Those which had a limited duration, and were in a greater or less degree self-protective, such as small-pox and scarlet fever. 2. Those like leprosy and tuberculosis, which were persistent and ingravescent, and in no sense self-protective. It was in relation to the former, he said, that discoveries had hitherto been made by means of which the inoculation of an attenuated variety of the virus prevented recurrence. We know

nothing of the real nature of the protective influence thus imparted, but in such diseases it was not the mere presence of the specific organisms which caused mischief, but the poisonous matter which these organisms discharged. If such diseases as leprosy and tuberculosis were to be cured by injections, it could scarcely be by the injection of an attenuated virus, as they were persistent and ingravescent diseases not tending to cure. If curatively dealt with, it must be on other principles than those governing the other class of diseases.

Dr. Abraham stated that he had met with very favorable results in lupus with Koch's remedy. He had injected forty or fifty patients, and in only a few had no benefit resulted.

Dr. Wheaton had had the opportunity of observing a large number of cases treated by Koch's fluid. In no case had he seen permanent improvement, but in nearly all cases a temporary improvement occurred.

Dr. Heron said that in a certain number of cases patients had improved under the use of "tuberculin"—Koch's remedy. Cough was less troublesome, night-sweats disappeared, and breathing was more free. The rales also improved, becoming less and less marked. He considered the remedy beneficial in early cases of tuberculosis. In lupus vulgaris the results had been so marked that he felt sure the remedy would soon be regarded as an essential part of ordinary treatment, but there was danger of the disease reappearing.

Dr. Theo. Williams had tried the treatment in fourteen cases of undoubted phthisis, and considered its results disastrous.

Dr. Bagshaw reported a case of pulmonary tuberculosis that had been cured by "tuberculin." A cavity of the lungs had practically healed. He employed thirteen injections.

Dr. Ackland commented upon the fact that the remedy was a secret one. Dr. Douglas Powell, the president, said that it could not be regarded as a secret remedy; for its composition and the general method of its preparation was known.

A NEW CABINET OFFICER.—Dr. Comegys, of Cincinnati, at the recent meeting of the American Medical Association at Washington, offered the following resolution: "That a committee be appointed to consider the question of petitioning Congress to create a Cabinet officer to be known as the Secretary of Public Health." The motion was carried, and

Drs. Comegys, N. S. Davis, and Richardson, of Louisiana, were appointed as the committee.

WARNER'S THERAPEUTIC HANDY REFERENCE BOOK is a small volume issued by William R. Warner & Co., of Philadelphia, the distinguished manufacturing pharmacists. Every physician should have a copy, as it is filled with information valuable to practitioners of medicine. It explains the various weights and measures, gives information as regards prescription writing, contains pasological tables, signs of pregnancy, lists of poisons and their antidotes, and very much other useful information that we have not the space to detail. It is a 12mo of 119 pages.

A CINCINNATIAN HONORED.—A telegram from Chicago, which reads as follows, has just been brought to our attention: "The trustees of the American Medical Association met here to-day to elect an editor and business manager for the *Journal of the American Medical Association*. There was a sharp contest for the position. Dr. J. C. Culbertson, of Cincinnati, now editor of the *Lancet and Clinic*, was finally selected. He is expected to remove to Chicago and take immediate charge."

As one of the friends of Dr. Culbertson we congratulate him on his appointment. There has been much complaint as regards the business management of the *Journal*; but we feel sure that with Dr. Culbertson at the helm, the dissatisfaction will cease. He, with his superior executive ability, will make it flourish like a green bay-tree. We will regret to part with him as a townsman, for he is a genial, pleasant gentleman, who is always ready to extend a kindness.

The American Medical Association.

Just as we are closing the present number of the MEDICAL NEWS we have received the *Medical Record*, of New York, of May 9, containing the proceedings of the *American Medical Association*, which held its session this year at Washington, beginning May 5. From the *Record* we have culled the proceedings here given.

The session was held in Albaugh's Opera House, and was called to order by Dr. D. C. Patterson, Chairman of the Committee of Arrangements, at 10:30 A. M. The opening prayer was by Rev. Dr. S. M. Newman, pastor of the First Congregational Church.

Hon. J. W. Ross, a Commissioner of the District of Columbia, delivered the address of welcome. The address was a very interesting one.

Among other subjects treated was *Professional Secrecy*. "It was a curious fact," he said, "that the sacredness of the relation between counsel and client was recognized in common law, and the counsel's lips were sealed as to all matters learned by him from his client; yet there was no recognition in common law of the corresponding relation between physician and patient. Many of the States had enacted such laws, but in the District of Columbia the common law prevailed, and the speaker suggested that Congress be asked to pass an act whereby the veil of secrecy might be drawn over the confidences of the patient with his medical adviser."

The *Hippocratic Oath* was sublime in its high conceptions of the work and moral character of the physician, and the modern Christian physician should exceed these conceptions of the pagan moralist; he should be the highest exemplar of the honorable man, and he is this and more—he is, by his courage, his sympathy and other noble traits, an exemplar of the highest Christian morality.

Dr. W. T. Briggs, of Nashville, the President, after the close of the address of welcome, addressed the Association. He said that medicine was the true connecting link between science and philanthropy, and that the gentlemen present were assembled for the sole purpose of promoting science and the good of humanity. In this age, which is preëminently that of progress, medical science has been no laggard, but has kept pace with, if it has not actually outstripped, all the other sciences. The need that was felt for the coöperation and associated action of all the physicians of the country was what had led to the formation of this Association. A few of those present at the organization of the society were still left, and preëminent among them all was the venerated father of the Association, Dr. N. S. Davis. The President discussed various subjects; among others were the Unification of the Profession; Medical Education; More Science and Less Business; An Editor with a Salary; A Qualification for Membership in the Association. In discussing the last subject mentioned, he said that it was undoubtedly due to the efforts of the Association that medical education in this country was where it now was; and now that the medical colleges of the land were ready to adopt the suggestions of the College Association made last year in Nashville, he thought it would be eminently proper to refuse the privilege of membership to all who should hereafter be graduated from, or be professors in, colleges not coming up to the standard.

Dr. Briggs recommended the appointment of a section of *Original Research*, which should be empowered, as in times past, to offer prizes for essays, etc. This would stimulate original research, to which, it must be confessed, American physicians have not devoted as much time as could be desired. We have labored under the possible disadvantage of not being able to obtain Government aid, such as is given to workers in other lands, and it was all the more necessary, therefore, that private enterprise exert itself to promote the prosecution of scientific investigation.

THE REPORT OF THE TRUSTEES of the *Journal* was then read. The trustees had recommended that the publication office of the *Journal* be removed from Chicago to Washington, but had thought best to ask the members to express their opinions on the matter through the columns of that paper. These opinions had been so overwhelmingly in favor of keeping the office where it is, that the trustees had acquiesced and would recommend no change. The discussion had brought out expressions of bitter sectional antagonism, which was to be deprecated; yet it had resulted in good to the *Journal*, and in reawakening the interest of the members, which had begun to grow cool.

TO CHANGE THE DAY OF MEETING.—Dr. Gihon, of the United States Navy, brought up the amendment to the constitution changing the day of meeting to the first Wednesday in May or June, instead of the first Tues-

day, as at present. He thought that such a change would give more time to members to register and so become entitled to vote at the first general session, and would also allow of time before the assembling of the Association for meetings of various other medical societies. On motion, action upon this amendment was postponed to the next general session.

RUSH MONUMENT COMMITTEE.—Dr. Gihon then read the report of this committee. He reported progress—very slow progress—so slow, indeed, that instead of the seven years that the committee had been at work, seventy times seven would be needed before Dr. Rush's memory could be perpetuated in imperishable bronze. The speaker said that the committee had resolved to send "coin-cards" to physicians, so that each one could send by mail a fifty-cent piece. One of these "coin-cards," with a stamped and addressed envelope, had been sent to each of some seventeen hundred physicians in Philadelphia, and enclosed was a letter setting forth the object of the appeal, saying that the trial of this new method was made in Philadelphia, since that was the home of Benjamin Rush; that upon the success of this final appeal would be based the decision of the committee to approach other members of the profession in the same way, and begging each one to send a check, a dollar bill, a fifty-cent piece, or a reply that he did not care to contribute. As a stamped and addressed envelope was inclosed, it was confidently hoped that answers would be received from all, but to the 1,700 letters sent there were but 160 replies. The cost of postage, coin-cards, folding and addressing was \$95, and the amount received was \$155.50. The committee was disappointed in Philadelphia.

THE REPORT OF THE TREASURER showed a balance in the treasury of \$9,427.21.

DR. N. S. DAVIS, of Chicago, announced a meeting of physicians interested in the subject to establish a national medical temperance society after the model of the British society, which had been organized to promote abstinence from alcoholic beverages.

ON THE SECOND DAY, Dr. E. L. Shurly, of Detroit, delivered the annual address on General Medicine. He confined himself to generalization of the pathological and chemical features of the subject. He laid stress at the outset of the address upon the importance of bearing in mind the fact that the organized human body is under the influences of the forces of nature—ether, energy and matter—with the addition of the vital force, and that the only difference between life and death consisted in a different arrangement of the molecular elements. The changes which are continually going on in the human body give rise to a vast array of physiological and pathological products, some of the latter being so noxious as to rapidly destroy life. Proteids, peptones and ptomaines are all formed in this manner, and over forty of the latter, all more or less noxious, have been discovered. These, once formed, are received into the system and produce a general toxæmia which is characteristic of the disease which they represent. These diseases, therefore, are in reality blood diseases, due to an altered pathological condition of the blood. Many of these poisonous substances, however, are rapidly destroyed in the blood before they are able to produce any depression of the system. Others maintain their noxious property. Absorptions of ptomaines from the intestinal canal may account for many of the so-called malarial diseases, the proof of which may be found in the rapid relief following the administration of brisk cathartics. Chemists and pathologists have discovered that diphtheria, tubercle and other diseases, including gonorrhœa and syphilis, give rise to the formation of a ptomaine, which is itself the cause of the diseased condition, or toxæmia, rather than the original trouble itself. In addition, the development of the microscope has revealed the presence of immense numbers of bacilli and micrococci in the atmosphere, which play an interesting part in

the production of disease. Most of the species of these bacilli are destroyed by the tissues of the body; others are destroyed by healthy tissues, but find a favorable nidus or soil in unhealthy tissues. It is probable that pathogenic bacilli never develop except when some previous disease has brought the body into the proper condition necessary for such development. This development then occurs by catalytic action.

After merely touching upon the subject of immunity and susceptibility, Dr. Shurly turned to the practical consideration of the therapeutic action which appears to be indicated by the facts obtained. He said that the main therapeutic indication is: antagonism of the action of the ptomaines and microbes within the body. Such drugs must be administered as have been found in the laboratory to be detrimental or destructive to the existence of these poisons. Thus, chlorine, iodine, the chloride of gold combined with glycerin and sodium chloride, have been found by Drs. Gibbes and Shurly to antagonize successfully the action of tubercle bacilli within the body. Hypodermic medication seems to be better adapted to the successful treatment of these various conditions, as it appears to act more directly upon the diseased cells. Thus, Lauder Brunton recommends injections of balsam of Peru in phthisis; the bromide of gold, one-quarter to one-half of a grain, hypodermically, is lauded in the treatment of epilepsy as more valuable than the employment of the bromides in the usual manner. Dr. Shurly believes that animal poisons can be neutralized in the blood, and that this assumption will be shortly demonstrated. A sort of isomerism or antagonism exists between animal and chemical poisons, as proven in the laboratory, and this fact may be productive of tremendous progress in the therapeutical management of these cases.

THIRD DAY.—The trustees reported that the weekly circulation of the *Journal* was a few over 5,400 copies. No editor had yet been appointed. The place of publication would remain in Chicago, and the trustees advised that a building for the permanent home of the *Journal* be erected as soon as there was enough money in the treasury.

THE REPORT OF THE NOMINATING COMMITTEE was then read. President, H. O. Marcy, of Boston; First Vice-President, Willis P. King, of Missouri; Second Vice-President, Henry Palmer, of Wisconsin; Third Vice-President, W. E. Davis, of Alabama; Fourth Vice-President, W. E. Taylor, of California; Secretary, William B. Atkinson, of Philadelphia; Treasurer, Richard J. Dunglison, of Philadelphia; Librarian, George W. Webster, of Chicago; Trustees, W. W. Dawson, of Cincinnati, W. W. Potter, of Buffalo, and J. H. Rauch, of Illinois.

HOT SPRINGS, ARK., WAS RECOMMENDED as the next place of meeting of the Association. It was moved to amend the report to change the place of meeting to Detroit. This was opposed by some who stated that the hotels in Detroit were insufficient to accommodate as many members as were present this year in Washington, and also that there was no invitation from the Detroit or Michigan societies. Another amendment was offered, substituting San Francisco in place of Detroit. This was laid on the table. The motion to meet in Detroit was then carried after a rather excited discussion, and the putting and tabling of a number of motions, cries of "We don't want the New York fight over again," cat-calls, shouts of "Question," etc. The report of the committee was adopted on motion of Dr. Davis. The question of Dr. Potter's ethical standing was referred to the Judicial Council. It was then decided that the next meeting be held on the first Tuesday in June instead of May.

THE ADDRESS ON SURGERY.—The address on surgery was then delivered by Dr. Joseph M. Matthews, of Louisville, Ky. The speaker said that he had been embarrassed in selecting a theme for his address, but had finally taken the subject of stricture of the rectum. He doubted whether spasm

of the rectum was ever seen, and if it were it would be symptomatic only. Dysentery as a cause of stricture he rejected, looking upon it rather as a consequence of stricture. Tuberculosis is an occasion of ulceration, but not of stricture. The grand common cause of stricture is inflammation, but this is a very general term, including traumatism, cancer and syphilis. The only venereal cause is secondary syphilis; the prime, the sole etiologi- cal factor is inflammation.

The speaker objected to colotomy, believing that it was often done uselessly, when there was no possible chance of relieving the patient. He looked upon this operation as a dernier ressort, and deprecated its performance early in the progress of the disease. We can not always diagnose cancer in its early stages, and the making of an artificial anus for benign stricture is never justifiable. The operation, furthermore, does not prolong life, nor does it, as a rule, relieve the pain in the rectum. Pain is not always present, and when it is it can be overcome by opium. When a patient has only a few years to live there can be no serious danger of his becoming addicted to opium. Obstruction can usually be overcome by dilatation, so that colotomy is not indicated by this condition. From twenty to forty-five per cent. of all operations of colotomy result fatally within twenty-one days, and those patients who survive are benefited in no measure proportionate to the risk of the operation and the distress caused by an artificial anus. The diagnosis of stricture when within four inches of the anus is easy, but it is often difficult to determine its character.

Dr. Matthews believed that at least sixty per cent. of all cases were due to syphilis, and most of the rest were malignant. The induration of syphilis is more even than that of cancer. The speaker condemned utterly the use of bougies, either of metal or hard rubber, in the diagnosis of stricture, on account of the great danger of the procedure. He objected to gradual dilatation and looked upon forcible divulsion as the most useful in cases of fibrous stricture. He was very partial to incisions, more especially internal division, and did not believe there was much risk in the latter. There is no necessity of passing bougies subsequent to the operation, when linear incisions will accomplish so much at one sitting.

Dr. Matthews did not see the use of resorting to such a tedious method as electrolysis, even were that operation effectual. He did not believe in extirpation for benign cancer, but it was the ideal operation for cancer when seated low enough in the rectum. Excision removes the disease and gives the patient a chance of cure, whereas the horrible and disgusting operation of colotomy is at the best only a palliative. It does not relieve pain, does not cure the patient, does not prolong life, and is no more effectual than other means in obviating the effects of obstruction. Colotomy might be justifiable in the case of cancer of the sigmoid flexure, and of fibrous stricture high up, where it can not be divulsed, incised or extirpated. In the case of non-malignant stricture high up the operation will prolong life and relieve suffering, but for low stricture, whether benign or malignant, it is never indicated. Where colotomy is to be performed, the lumbar operation is preferable.

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Original Contributions.

Management of Breech Presentations.

BY ROBT. A. MURRAY, M.D.,

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The object of labor is not only the emptying of the uterus, but also the safe delivery of mother and child. There are certain presentations which essentially cause great danger to mother and child and which still may be considered natural. It is my object to present, in this article, some practical points in the management of breech presentations where art should, I believe, interfere not so much on the mother's account, as to secure for the child immunity from a fatal result if labor were to proceed unaided.

According to the best authorities breech presentations occur about once in thirty labors; more frequently in multiparæ, and in premature deliveries.

The average foetal mortality according to Dubois is one to eleven, while in vertex cases it is about one to fifty. Rigby states that the nates presented once in 78 cases, the feet once in 105.8; of the nates cases the child was born dead in the proportion of one to 3.8, and in the footling births one to 2.8.

The average foetal mortality is shown to be about 25 per cent. The causes conducing to this large foetal mortality are generally stated by the authorities to be that the breech being smaller than the head and not so fully filling up the pelvis, the bag of waters does not act advantageously in dilating the cervix.

Next the funis is apt to descend and be compressed during the descent of the body and head; also the arms may go up, and interfere with the descent of head; and time is lost

in extracting the head if it extends or gets caught above the pubis.

After considering all these causes and others which might be presented, and my experience in a number of breech cases, I think that there are a few points which have not received the attention they deserve, and which if apprehended would materially reduce the large foetal mortality.

Although breech presentations have been shown to be most frequent in multiparæ where previous births justify the presumption that the pelvis is not much, if any, contracted, yet I have observed that in primiparæ the pelvis has not been roomy, but as a rule contracted, speaking only of mature deliveries; so that the presentation of the child was really the best, and indeed the same as it would be if podalic version had been effected.

While in breech births in multiparæ generally the child is in the ordinary position at the superior strait, the knees crossed, and the feet near the buttocks, so that the size of the breech is not only enlarged, but the feet made easily accessible if the necessity of breaking up the wedge occurs; in primiparæ, on the other hand, it is frequently seen that the limbs are fixed on the abdomen, the feet approximated to the face, and if labor has to be aided the hand has to be introduced farther into the uterus than in any case of version; and this necessity I have observed many times, and in every instance where interference has been called for and aid thus rendered, the child extracted, as in true podalic version, the successful result justified the maneuver.

The two cardinal points in the management of breech cases, I believe then, to be the determination of the position of the child by external manipulation, its approximate size, and the position of the feet; next a thorough examination of the pelvis, its diameters, and the capability of distension of the soft parts.

I do not believe since Barnes has shown so scientifically that the theory of podalic version depends, for its truth, on the fact that a child's head can come through more easily and safely by the base than by the vertex, and which is generally accepted by accoucheurs, that the statement of one of our best authorities should be followed. He states, "Early in labor, with the membranes intact, it is desirable, in consideration of the unfavorable prognosis for the child, to try and perform cephalic version by external manipulation."

When we have a breech presentation we should first de-

termine by external manipulation the position of the child by feeling for the hard head, then the position of the feet, and by auscultation the point of loudest sound, and frequency of the child's heart-beats.

Internal examination will confirm the external, also tell the dilation of the cervix, its dilatability, the size of the bag of waters, the diameters of the pelvis, and the effectiveness of the pains.

The first stage is longer than in vertex cases, and as long as the amniotic sac is unbroken, no harm can accrue to the child, and the bag of waters should be carefully protected from rupturing; and the strength of the patient should be carefully husbanded. As soon as the waters rupture the funis must be prevented from prolapsing, and every endeavor should be made to complete the first stage by full dilatation of the cervix; since the waters are apt to rupture prematurely, and the child and placenta compressed by the uterus, the circulation is interfered with, and the child may be lost before even the second stage has begun.

The heart of the child should be carefully auscultated, and when it becomes rapid and feeble in action, the period of delay is past; artificial delivery is demanded if a live child is to be born.

Hot douches, and, as some still recommend, ergot, are generally not only useless but dangerous—the dilatation of the cervix by the fingers, with proper antiseptic precautions, while slight chloroform anæsthesia is maintained, I have always found successful.

If the breech descends after this, and the pains are effective, the foetal heart should be watched, and extraction should only be performed if the child's death seems imminent.

If the first stage has been completed, and the breech is wedged in the superior strait, or in the upper part of the pelvis, with the foetal heart failing; and in sacro-iliac presentations generally, where they do not show signs of rotation, in the interest of the child extraction should be performed. If the breech is in the ordinary position with the feet near to the superior strait, this can readily be done by pushing the breech up with two fingers, and grasping the pubic foot; when this has been pulled down the labor is under control.

If, however, the limbs are extended on the abdomen, the feet against the face, the whole hand, well oiled, must be introduced, palmar surface to the abdominal side of the child, clear to the fundus of the uterus till the instep of the anterior

foot is grasped, when, flexing the leg on the thigh, it can be drawn down out of the uterus, breaking up the wedge and also controlling the labor. Extraction may then be proceeded with by making gentle traction, while the uterus is kept contracted by the pressure of an assistant's hand, so that the arms follow down at the sides of the trunk; the child's limbs and breech as they pass through the vulva should be grasped in a warm towel, and traction always made in the line of the superior strait, the posterior buttock being gently lifted out of the vulva, so that no laceration of the perineum be caused. As soon as the funis can be felt, the condition of the child's heart should be determined; if it beats forcibly, the funis should be placed in one of the oblique diameters, so that it will not be compressed. If pulsation is feeble, the uterus should be compelled to contract by pressure and traction made gently to cause descent of the body; the arms, if they have gone up, may be liberated by passing two fingers over the abdomen of the child, till they are caught, and then brought down across the abdomen; this latter maneuver is facilitated very much by rotating the body of the child on its long diameter so as to throw the arm across the abdomen; particularly is this useful if the arm has become fixed at the side or behind the head.

When the head descends it is all-important that it should be fixed. This may be accomplished by the external pressure on the uterus by the assistant, or more directly by pressure on the forehead, while the two fingers of the obstetrician introduced into the mouth of the child aid by slight traction, and also form a gutter to give air to the child, so that time is allowed for the flexion of the occiput.

The flexion of the occiput is best accomplished by grasping the shoulders from behind with two fingers pressed on the occiput, while with the other hand two fingers being inserted in the mouth, the body of the child supported on the arm is raised gradually over the pubis, and on to the abdomen of the mother, the fingers of the anterior hand pressing the occiput upward so that the head flexes around the suboccipital point, and the shortest antero-posterior diameter of the child's head passes through the vulva. The forceps may also be used to the after coming head, but they have to be quickly applied, and may be taken off, and the before mentioned extraction employed, as soon as the head has passed through the superior strait.

Particular care should be taken that there is a gutter made

by the fingers to the mouth, as the reflex irritation from the body often causes breathing to be instituted while the head is still in the pelvis.

The fillet has been used, also the finger hooked in the groin, and the blunt hook ; but these measures, while useful in the middle straits of the pelvis, are not only difficult, but take time and are in contracted pelvis ineffectual, only tightening the wedge.

The blunt hook should very seldom be used, as it is dangerous, and should only be employed on a dead child.

Forceps may be applied to the breech where it is in the middle or lower straits, where much traction is unnecessary.

Recently, in two cases where the limbs were extended on the abdomen in primiparæ with moderately contracted pelves, I have delivered live children by the above procedure where the fœtus would assuredly have perished if a policy of waiting had been pursued.

I would not be understood as advising the securing a foot in all breech cases, since the majority of cases proceed normally ; but I would emphasize the necessity of careful external examination, as to the position of the feet, thorough measurement of the pelvis, watchfulness of the condition of the child's heart, and appreciation of the resources at our command for quickly effecting delivery, if we would avoid the excessive fœtal mortality. And I believe with aseptic hands we can do safely, and without prejudice to the mother, the procedures advised.

Translations.

The Necrosis by Coagulation.

BY CRITZMANN.

Translated from the French for the CINCINNATI MEDICAL NEWS by Dr. H. Illowy, Cincinnati, O.

The classics are in accord as to the different modes of death of the histological elements. The death of a cellule or of cellular groups may be determined by mechanical causes, by thermic causes, and finally by circulatory causes. The first two varieties do not occupy us ; likewise the necro-

sis from nervous causes, the role of which is still too complex to be satisfactorily viewed in a few lines.

Anæmic necrosis is generally due to a vascular obstruction in a certain given territory. This obstruction may be realized by the formation *in loco* of obturating clots (thrombi) or by the importation into a blood-vessel of a fragment of clot or plug formed elsewhere (emboli), by inflammation of the vascular parietes, and finally by ligature of the vessels which nourish the elements of the anæmic territory. In order that a tissue should die, it is not at all necessary for the vascular obstruction to be permanent. A temporary obstruction, like that provoked by a spasmodic contraction of the vascular parietes, for example, suffices to determine cellular in an organized territory by impeding for a certain time its depuration and its nutrition. The highly organized tissues perish more rapidly than those whose sole role it appears to be to furnish a sound framework, a stout support for the nobler elements of an organ. It is thus that the nervous substance, that the renal and intestinal epithelium, succumb after an obstruction that has lasted hardly two hours, whilst structures of an areolar origin resist absolute anæmia for a period of twelve hours. The immediate lesions which anæmia provokes in a cellule of an embolized region, for example, are hardly known, except experimentally. In man, we only know the transformations undergone by mortified cellules that continue to remain in the midst of a live organic structure. Virchow has shown that these elements take on characteristic aspects and forms by the loss, either of the whole, or of the greater part, of the water of constitution. This process, which he has described under the name of inspissation, was especially applicable to the evolution of tuberculous products and to caseous degeneration. The new histological methods rather opposed the theories of Virchow. In place of inspissation there was substituted the necrosis of coagulation.

In the lessons of Cohnheim the name of necrosis of coagulation first appears. But the fact itself and the histological process were studied by Weigert. This eminent observer was struck with the amorphism of the elements constituting the diphtheritic false membranes; the cellules of these latter are undistinguishable; their nuclei disappear with such a rapidity that even the best coloring matter can not bring them out; moreover, wherever these lesions exist the products have, to the naked eye, the appearance of

coagulated fibrin. With these two characteristics, resemblance to the naked eye to coagulated fibrin and rapid disappearance of the cellular nucleus, Weigert and Cohnheim described and defined a new morbid process, to which the latter of the two authors gave the name of "Necrosis by Coagulation."

The name was a fortunate one and for a long time, perhaps even to-day, everything was necrosis by coagulation. The waxy degeneration of muscular fibers, caseous degeneration, hyaline degeneration were considered by Weigert, and afterwards by other German authors, as so many forms of necrosis by coagulation. This generalization proved that if the anatomo-pathological anatomy was real, the conception, and consequently the definition of this phenomenon, was incomplete. The amorphism of the cellular elements is encountered in fact in a great number of morbid reactions; this sole general characteristic does not suffice to create a new form of necrosis, because taking as a general character a phenomenon which is common to a great number of processes, provokes almost always arbitrary generalizations.

Thus we see Ziegler adopting for necrosis of coagulation two principal forms: A first form, which we encounter in the blood, in the lymph and the fluids derived from them, and a second form which pertains especially to the cellular elements, properly speaking. The first is characterized by the apparition in the fluid of masses, homogeneous or fibrogranular, the second by the coagulation of the cellular protoplasm and by the transformation of granular, frequently homogeneous of the cellules. However, this transformation is frequently confounded with another form of cellular death, which has been described under the name of hyaline necrosis.

In resume Ziegler ranges under necrosis by coagulation, on the one hand, the coagulation, properly speaking, of the blood and of the lymph, and on the other the hyaline degeneration, or at least one of its most frequent forms.

Thus understood, the necrosis by coagulation was very near its obliteration. It became necessary, in order that it might not escape the anatomo-pathologist, to give it precise limits and well-marked, absolute characteristics. Thus we see Birch-Hirschfeld opposing the division of Ziegler. The necrosis by coagulation, says Hirschfeld, can not be invoked except in certain well-determined cases where there has occurred indubitably a coagulation of the cellular proto-

plasm with rapid disappearance of the nucleus and where the fibrinous or caseous masses are due to a fusion of the cells thus modified. Klebs is still more radical in his views: Necrosis by coagulation is only applicable to cells that have been stricken with sudden death. In this case the cellule becomes brilliant, glistening, loses its transparency, but preserves in a large part its primitive structure. Under this form the necrosis by coagulation is not at all any more that described by Weigert; to the rapid disappearance of the nucleus, which Weigert regards as a special phenomenon, no importance is attached.

One fact stands forth prominently in this brief historic review; that is the constancy of the coagulation of the cellular protoplasm. However, in 1886, at the Congress in Copenhagen, we find Virchow contesting even this coagulation, which, according to the celebrated German anatomopathologist, would rather be the effect than the cause of cellular death; the rest of the necrosis of Weigert is due to an inspissation—that is to say, a dehydration—which the mortified tissues undergo during their sojourn in the living organism. A recent work of Arnheim supports this view of Virchow. It is not a question, in fact, as Weigert pretended, of a coagulation of protoplasm under the influence of the lymph in circulation, but of a veritable mortification; the disappearance of the nucleus, proper to all the necroses by coagulation, can be obtained experimentally; all that is necessary is to plunge some fresh pieces into a feeble saline solution, and in eighteen hours afterwards in cuttings, in twenty-four hours afterwards in tissue fragments, the nucleus can be seen disappearing in the marginal cellules of the fragment. The condensation and induration of tissue are due to the inspissation of Virchow.

Israel, from whom we have excerpted part of this historical review, weakens still more the argumentation of Weigert. Three fundamental characteristics define the necrosis by coagulation: 1. The coagulation of the cellular protoplasm; 2. The consecutive disappearance of the nucleus; 3. The microscopic aspect of tissues whose cellules have undergone this necrosis. The two last conditions are possible, but it has never been proven that a coagulation of the protoplasm really existed. There is only one modification of the liquid state of the protoplasm which could justify the hypothesis of coagulation, and not the glistening or brilliant aspect, the greater or lesser transparency of the

cellule. And this proof has not yet been furnished. In favor of the coagulation hypothesis, only the microscopic appearance of the damaged tissues is invoked. But this same appearance may present itself in a great number of conditions or states. Induration of the mortified parts always keeps step with an augmentation of their density and a diminution of their volume. Always these phenomena can be perfectly explained by the dehydration of the parts; in one word, by the inspissation of Virchow.

Weigert strongly contests a diminution of volume of the cellulæ masses that have undergone necrosis by coagulation. A renal infarction, he says, a focus of cheesy degeneration of the lung, is always voluminous at the outset. Coseated lymphatic ganglions never appear to have lost in volume, in undergoing cheesy degeneration. Moreover, at the outset of the coagulation, the cellulæ which have still preserved their contours have not diminished in volume at all, as the coseated neoplasm very well show. The same fact is noted in cheesy pneumonia. A coseated alveolus, as long as it retains its limits, is not any smaller than any neighboring unaffected alveolus. And, whenever any organic structure, mortified or not, suffers a loss of water, undergoes dehydration, it always appears smaller than a coagulated organic structure. The mummified elements of eschars are much smaller than in the normal state, though they have preserved their nuclei.

It is true, Israel responds, that a renal infarction at the outset, that is to say, in the first two days of its production, appears voluminous and to stand out in relief from the adjoining parts; but the experiments made for this purpose have proven that the augmentation in volume of anæmic tissues is a phenomenon of sanguine stasis. This latter passed, the infarction becomes small. Moreover, this augmentation in volume is most frequently only an apparent one; the infarction projects because the mortified tissue having lost its elasticity, the surrounding parts push it out, enuchate it as it were. On the other hand, the infarction undergoes retrograde processes; most frequently the mortified cellulæ undergo fatty degeneration, which augments their volumes, and which raises them out to almost the appearance of a fibrinous coagulation.

It is true that the coseated alveolus is not any smaller than the neighboring normal alveolus. This is due to the dispensation of the damaged alveolus by the products of

nepatisation, which regularly precedes pulmonary caseation. A tubercle always occupies more space than the healthy tissue at the expense of which it is developed, and this because the tubercle, in order to find lodgment, disassociates the elastic fibers of the affected lung. The caseous degeneration, the degeneration of infarctions of the kidney, may, therefore, be due to a dehydration, to an inspissation and not to a necrosis by coagulation. The disappearance of the nucleus, the amorphism of the elements, are post-mortem phenomena.

The inspissation, which characterizes the caseous degeneration, can not be compared with the dehydration occurring in an eschar; the cheesy cellule loses a quantity of water, which surpasses that which it should contain in its new chemical constitution of a dead cellule in presence of living cellules; on the other hand, the gangrenous elements of an eschar lose a quantity of water, which surpasses that indicated by the hygrometric state of the air, thus a quantity infinitely larger; thus they become smaller than the parts that have undergone cheesy degeneration.

In order to elucidate these points, and to well define the process of necrosis by coagulation, Israel has instituted a series of experimental researches on the epithelium of the kidney. We shall give his results in a subsequent article; for the present, we content ourselves with saying that the necrosis of coagulation has undergone formidable assaults, and that neither the disappearance of the nucleus, nor the coagulation of the protoplasm, nor the microscopic appearance, appear to make out of it a process at all different from cheesy degeneration, for example.

The Use of Chlorhydrate of Morphine in Mental and Nervous Diseases.

BY DR. VOISIN,

Physician of the Hospital La Salpetriere—A lesson delivered to the Students.

Translated for the CINCINNATI MEDICAL NEWS from the *Bulletin General de Therapeutique*, Paris, by Mon. E. A. Quetin, Juge de Paix, Tonnerre, France.

You often hear me speak of the use I make of the chlorhydrate of morphine with my patients; I wish to insist before you upon the advantages I derive from that therapeutic agent in a certain number of nervoso-mental affections.

Morphine exerts a sedative influence on neuralgia, on pain,

on the centers of perception ; it diminishes through this last action the sensitiveness of the brain to painful impressions. That medicament acts efficaciously upon inertia, upon insomnia, upon sensorial hyperesthesia, upon peripheric neuralgia, upon illusions, upon hallucinations, and consequently upon delirium. It is very useful in mental affections characterized by depression, or when there is a state of anxiety with groans and tears. It affords means of relieving the physical and the moral pain ; we generally do not take sufficient heed to the pains of patients, and we do not pay enough attention to the neuralgias of long duration and their influence on the moral and intellectual functions of the sufferers. Many physicians make light of the hypochondriac's complaints, without considering that, with every hypochondriac, there is a dolorous element, an initial cause for complaint, and that those patients have gradually arrived to exaggerate the pains which they felt at first. Imagination is not everything with those patients ; there is real suffering. I often have shown you patients who, after exhibiting pains for long years and having been considered hypochondriacs, had arrived at mental alienation and even at general paralysis.

In the therapeutics of demented patients, morphine presents this great advantage, that it can be employed in hypodermic injections, an advantage common to all medicaments that can be injected. That method, indeed, procures an absolute certainty of the treatment of patients who, unconscious of their condition, refuse to swallow anything ; fraud is impossible for them or their attendants. The physician may therefore follow the effects of the medicament with a perfect security. I must not fail of reminding you that the hypodermic method is due to Erlenmeyer, Béhier, Bourdon, and it was first applied in mental diseases by Erlenmeyer, Roller and Kraft-Ebing. As to me, I used it as early as 1867, and must say that, during those twenty-four years, my conviction has increased daily, as well as my confidence in that method and in that medicament. The sensations felt by the patients are most encouraging ; they tell us that their pains cease almost just after the injections ; that they have a perception of strength, a revival of will and firmness. My patients can work after injections ; that beneficent effect lasts for several hours ; thus two injections in twenty-four hours are ordinarily necessary. Do not believe, gentlemen, that it should be essential to use high doses. I always begin with very small doses—one to two milli-

grammes. I increase the dose by one milligramme per day ; then I maintain it stationary for several days ; I reiterate the ascending period until I have noticed some physiological phenomena of a favorable prognostic.

The insane who are to be cured or be improved through the subcutaneous injections of morphine present, in fact, from the first doses, the following phenomena, which will become more marked, then after awhile will decrease, and of which some will disappear at last. I note them in the order of their apparition : Redness of the face, of the conjunctive membranes ; nausea, vomiting, sensation of general heat, prostration, lumbago, sleepiness, emaciation and loss of weight in the beginning, continuous decrease of arterial tension ; afterwards amelioration of the physiognomy, which beautifies, becomes intelligent ; the complexion clears up from the chin to the forehead ; the forehead, at a certain moment, is yet yellow, when the lower part of the face is fair and rosy ; frankness and vivacity of the eyes, increase in weight and corpulence, reappearing of the regular menses.

THE VASCULAR SYSTEM.—Circulation presents evident modifications. The cheeks become very red soon after the injection and remain so at times for several hours. The conjunctives become turgid, the pulse varies notably ; I often was struck with its fullness, sometimes with its acceleration. Those modifications of the pulse are especially appreciable at the doses of ten to twelve centigrammes ; they are the more important to be observed because, in most cases of neuropathic insanity, the intensity of the arterial spasm seems to me to have a positive correlation with the trouble of the intellect. The relation of cause to effect is the more evident that the diminution and suppression of the excess of arterial tension accompanies the beginning of improvement, and that no sick woman has got well, under treatment with morphine, without presenting the modifications of pulse indicated by the sphygmographic outlines I have taken.

INDICATIONS.—The indications of treatment of mental alienation with chlorhydrate of morphine apply especially to cases in which the *vesania* is simple and unconnected with any congestive complication. It is very useful in hallucinations, in the depressive state, in anxious lypemania, in all the forms of alcoholism, in melancholic folly with groans or stupor, ecstasy, ideas of suicide. In hysterical folly, the successes of that medication have been very numerous in my hands and in those of my colleagues and pupils. I have been

able to succeed in a certain number of cases of the folly of doubt, among others with a young lady eighteen years old, with a woman of thirty-two, with a single lady of thirty-five. The puerperal folly, non-congestive, is one of those that yields oftenest to that medicament. I was able, four years ago, to treat and cure with that method a lady who had been taken with puerperal folly, hallucinations and maniac delirium four to five days after childbirth. I employed the dose of six centigrammes at most daily. The agitation, the hallucinations, subsided at the end of six weeks. Sleep returned gradually. The sick woman was well at the end of two months and a half, and the cure has been permanent since. During the last ten years, forty-three women affected with vesanic insanity have been treated in my service with hypodermic injections of morphine; twenty-eight were cured, nine were benefited; with the other six, no amelioration could be obtained. None of those cured or benefited had any relapse. All had hallucinations and presented lypemania anxious or not, or maniac excitement. Others are under treatment among whom the proportions of improvement are the same. In conclusion, let us add that, with all those sick women, a preliminary examination of the urine was made, as it was proper, before undertaking any hypodermic medication incompatible with a renal affection. That is a formal and an elementary indication upon which we shall not insist again.

DURATION OF THE MORPHINIC INFLUENCE.—The duration of the influence of morphine upon the insane varies much according to the degree and variety of the mental trouble. With quiet patients, like certain monomaniacs, the duration of the action of morphine is of nearly twenty-four hours; with maniacs, those affected with hallucinations and agitated lypemaniacs, the duration of the action is seldom of more than eight hours, but never extending to twenty hours. It goes the same with hysterical women. Therefore, it becomes necessary, if we look for cure or improvement, to strengthen the morning injection by a second injection in the afternoon, and sometimes even by a third injection towards the twentieth hour; the last two being given with smaller doses than in the morning. This duration is revealed at times by singular phenomena; about the twentieth hour, the patients have chills, feeling generally uncomfortable, lumbago, depression; they are incapable of doing anything, and all that uneasiness disappears right after the injection. This need of the medication is so much the more interesting

to observe, when we have to deal with patients who ordinarily refuse all treatment, whilst we see them waiting impatiently for the moment when they will be treated, or take the turn of those preceding them; and that up to the day when, with an improvement of their condition, the intolerance of the medicament shall return.

COUNTER-INDICATIONS AGAINST THE USE OF MORPHINE.—There are formal counter-indications to that method of treatment: 1st. Every patient affected with inflammatory insanity idiopathic or symptomatic of lesions in the nervous centers, with epileptic madness or any form of general paralysis, would experience very bad results from an opiated medication. An error in the diagnosis might be fatal to the patient. 2d. Morphine is of no utility in insanity from arterial atheroma, and it might be injurious by reason of the congestions it produces which might bring hemorrhage through a vascular rupture. The diagnosis of the anatomic nature of insanity is, as we see, of the most serious importance, and we must take good care not to take a congestive or an inflammatory insanity for a vesanic insanity. In the administration of morphine there are unfavorable conditions which we can not explain; with some insane patients considerable doses of the medicament may be injected without producing any physiologic or medicamental effect, say one gramme, one and a half, even two grammes, and other patients can not tolerate even one milligramme, why, not one-tenth of a milligramme. It has been a long time ago since I asked Claude Bernard the motive of that tolerance and of that excessive intolerance; he was not able to explain it to me. I often witness that state of intolerance, in conditions of some interest, at the moment when a patient is doing better. Such individual, in fact, who supported very well six, eight, ten centigrammes of morphine during the period of state of the malady, can no longer stand more than a few milligrammes when the improvement is beginning. The intolerance is then becoming a favorable prognostic sign. Do not believe, gentlemen, that my patients can not do without morphine. Observation based upon many facts has demonstrated to me that the treatment can be suppressed without inconvenience, without uneasiness or vomiting, in three to eight days. When patients can not tolerate morphine, I do profitably associate atropine with morphine in the proportions of 0.001 to 0.01. Thus I obtain the tolerance of the morphinic treatment.

To sum up : The treatment of neuropathic insanity, cerebral anemic insanity, and simple insanity, by the chlorhydrate of morphine in subcutaneous injections, gives very satisfactory results. That medication is especially advantageous in the mental alienation with asthenia of the arterial system, and in the following symptomatic varieties : Lypemania with or without hallucinations, ecstasy, stupor, religious delirium, mystic, maniacal agitation, melancholic anxiety, delirium double formed. It acts, only on condition that the patients feel the physiologic effects of morphine. It is very hurtful in the congestive and inflammatory forms of alienation and in the alienation in consequence of atheroma ; so, I say again that the anatomic diagnosis of the malady can not be made with too much care. Among a few facts selected as types, I shall mention first two decisive observations :

Observation 1. The first one of those sick women, forty-one years old, had been deranged for five months ; in consequence of a metrorrhagia, she had become delirious ; despair, groans, sleepless nights, sickly disquietude, nosophobia, perturbation of the genital sense and of the affectionate sentiments (sudden and unexplained aversion to her husband). Anemia (carotid murmur), neurasthenic cephalœa, and finally anxious lypemania at the start. After recognizing the absence of any symptoms of ataxia and of meningo-encephalitis, we subject her to the morphinic treatment at progressive doses (from three milligrammes to three centigrammes, in three months.) Notable amelioration (sleep, no more cephalalgia). We continue increasing the dose in three more months up to six centigrammes. Disappearance of delirious ideas. From thence we go decreasing in three months and stop the injections. The cure is obtained and was lasting.

Observation 2. The sick woman F—, thirty-three years old, another lypemaniac with hallucinations of hearing and sight, extreme sensitiveness, insomnia, groanings and cries, panophobia, sitiophobia. No sign of meningo-encephalitis. Initial treatment : Beginning with the dose of three milligrammes, increase of three milligrammes every twenty-four hours, till cessation of the delirium on the third month. Suppression of the treatment by decreasing the doses, and leaving off after seven months of treatment. The cure has been lasting.

(Five more observations of similar cases are related, in one of which, in addition to morphine, the cure required bromide, vesication and shower-baths.) Then the professor concludes

thus: "The seven observations I have selected among many more, show the good effects of that medication which, with other advantages, permits treating those lunatics in their families, and without necessitating their confinement in an insane asylum."

Selections.

The Progress of Surgery for 1890

We make the following extract from the *International Journal of Surgery* for January, 1891:

In the last year there has possibly been a slight lull in the culmination of surgical discoveries, and yet we are unable to look back upon the progress of the year that has just expired without feeling that there is ample ground for congratulations to the medical profession upon the strides that have been made. The great event of the year was the Medical Congress at Berlin, where the large attendance of men most prominent in our art and science, from all parts of the civilized world, brought together a wealth of facts and views that are now crystalizing into a valuable mass of information. There has been noticed in the year gone by that reaction which was bound to follow the enthusiastic prevalence of intra-abdominal operations during the last few years. The matchless skill of the leaders in these procedures has taught us a technique that can scarcely be improved upon; while the number of operations performed have become less, through more perfect discrimination in the selection of cases absolutely requiring such measures. In the matter of operations for the relief of disorders due to inflammatory conditions of the vermiform appendix, the main points developed have been chiefly in the line of improved diagnosis, and in a general belief in the advisability of early interference. The study of intestinal anastomosis, first evolved by Senn, has been taken up by a host of men, though, strange to say, its practical applications are still limited too much to our own country. The monograph written by Professor Senn upon the subject of the diagnosis and operative treatment of gunshot wounds of the stomach and intestines, bids fair to become one of the classics of surgery for years to come. No better illustration of the progress made in the domain of surgery can be given than the brilliant results obtained by

Professor Bernays in a series of seven cases of gunshot wounds of the abdomen, which formerly would have been regarded as hopeless and left to die without surgical interference.

The methods of skin grafting and transplantation devised by Thiersch have proven their value in many hands during the past year, and now are fully admitted among the established surgical procedures of common occurrence.

Mr. Horsley's experiments in the transplantation of the thyroid gland of animals to the human subject have been followed by a practical application of the procedure, and bid fair to add one more to the many splendid results attained by this indefatigable experimenter.

In the surgery of the joints a more conservative tendency is becoming manifest; and in Germany, especially, the injection of iodoform emulsions in tuberculous joints has been employed with much success as a subject for more radical procedures.

Among the improvements brought about in the technique of special operative procedures, the bloodless method of amputation at the hip joint, devised by Professor Wyeth, of New York, and performed with success by himself and others, takes high rank.

Operations upon the nerve-centers and the nerves themselves have greatly multiplied, and operations of unheard-of magnitude have this year been reported, by which the brain and cord have become a far wider operative field than had ever previously been thought possible.

The discovery with which Koch startled the medical world a few months ago has not been sufficiently developed to permit of positive deductions regarding its value in the various forms of surgical tuberculosis, although from present indications it will supersede all other methods for treatment of lupus.

Such are a few of the results of the past year, and, in this marvelous age of progress, we are left to wonder at what we may have to chronicle for another year, though we are conscious that the last one has marked a decided era of improvement in our methods and knowledge.—*Fort Wayne Journal Medical Sciences.*

Pathological and Physiological Notes.

ANÆSTHESIA AND ANÆSTHETICS.—At a recent meeting of the Nottingham Medico-Chirurgical Society, Mr. Joseph White read a paper on this subject (*Prov. Med. Jour.*) based on an experience gained from 4,500 administrations. In order of frequency the anæsthetics used were: Chloroform, ether, A. C. E. mixture, bichloride of methylene, and amylene. Mr. White recalled his personal impressions of the intense professional interest aroused by the discovery of anæsthetics in 1846-7, and gave details of the early experience of the profession with the new agents, mentioning especially Simpson's belief—which, however, was not confirmed by subsequent experience—respecting the superior safety of chloroform over ether. The physiological effects of anæsthetics might be divided into four stages: 1°. The stage of continued consciousness. 2°. The stage of semi-consciousness. 3°. The stage of sleep. 4°. The stage of coma and threatened death. The special phenomena and dangers attending each stage were then discussed. In the first stage death might occur, and fear and alarm on the part of the patient might seriously aggravate the depression caused by the anæsthetic. A good many deaths occurred in the second stage, due partly to exhaustion caused by struggling, and partly to irregular respiratory efforts, by which large quantities of chloroform vapor are suddenly inhaled. Vomiting, too, was apt to occur, and to lead either to danger by its depressing influence, or to loss of time by inducing return to consciousness. In the third stage the patient passes into a tranquil state; the pulse becomes slow and regular, the pupil gradually contracts to small size, and the conjunctival reflex is abolished. The strong resemblance between natural sleep and the third stage of anæsthesia, as regards both the order and the character of events, was described at length. It was very rarely necessary to push anæsthesia beyond the third stage. In the *fourth* stage, the pupil dilates, the eyeball becomes fixed; the breathing becomes slow, stertorous and irregular. The heart beats more and more feebly; clammy sweats break out and death ensues, respiration generally ceasing before the pulse. Some details were next given of experiments—notably those of Sibson, Percy and Glover, and later of Snow and Richardson—on the action of anæsthetics. When a *large* dose was *suddenly* given to an animal the heart invariably failed first, whereas in the slow and sustained administration of chloroform the

respiration failed first, though at the same time the heart's action was much depressed. The results of the committee appointed by the Royal Medico-Chirurgical Society in 1863, and the Glasgow Committee appointed by the British Medical Association in 1877, were shown to be in substantial harmony. The Glasgow Committee pointed out the influence of chloroform—far more than that of ether—in lowering blood pressure and that such lowering might occur with great rapidity. They also insisted on the importance of watching the pulse as well as the breathing, and on artificial respiration as the most efficient treatment of threatened syncope. The first and second Hyderabad Commissions were then referred to and the conclusions of the latter carefully examined. Professor McWilliam, of Aberdeen, observed the effect produced on the exposed heart of animals by inhalation of anæsthetics, and found that under influence of chloroform all the cavities became dilated, whereas with ether dilatation was slight or inappreciable. Mr. White gave a detailed description of the views of the second Hyderabad Commission upon the order of cessation of respiration and pulse, and, contrary to their advice, emphatically advised attentive watching on *both* pulse and respiration. Mr. White approved the conclusion of Drs. Bomford and Lauder Brunton, that the inhibitory action of the vagus nerve, which is called into play in threatened or actual poisoning by chloroform, by slowing and diminishing the action of the heart, and reducing the amount of chloroform carried in a given time by the blood-stream, acts as a most important safeguard against an overdose. The paper concluded with practical directions for administration, among them being a warning not to push the anæsthetic during the struggling stage; the importance of carefully watching pupils, pulse and respiration; and in cases of danger immediate resort to artificial respiration.—*St. Louis Medical and Surgical Journal*.

The Identity of Diphtheria and Membranous Croup.

Discussed by the Louisiana State Board of Health.

At a regular meeting of the Louisiana State Board of Health, held March 12, 1891, a committee of three, consisting of Drs. Formento and Bezou and Mr. T. A. Clayton, were appointed to report upon the advisability of subjecting cases of membranous croup to the same sanitary measures as are

practised against cases of diphtheria. Accordingly, at the meeting of April 9 last, Dr. Formento, the chairman of the committee, read the following interesting report, which elicited considerable discussion :

GENTLEMEN—At our last meeting, the following resolution was presented by one of your committee :

“WHEREAS, Cases of membranous croup are considered by many physicians as cases of true diphtheria, *Resolved*, That hereafter all cases of so-called membranous croup be reported to the Board of Health, and all precautions recommended in cases of diphtheria be adopted against said cases of membranous croup.”

This motion, after some discussion, was referred to your Committee on Contagious and Infectious Diseases, which now has the honor to report as follows :

We have consulted numerous authorities and writers on this important subject, of both Europe and America, and the following is the result of our researches :

In France, where diphtheria has perhaps been better studied than in any other country, membranous croup and diphtheria are regarded, almost universally, as the same and identical affection. It was, as you know, in 1826 that the celebrated Bretonneau first grouped under one name those affections of the throat and windpipe in which there is formation of a false skin or membrane. In order to designate them, he coined the word *diphtherite* from the Greek word which signifies skin or parchment. The name diphtherite was subsequently modified to diphtheria by Trousseau, the most distinguished of Bretonneau's pupils and admirers. Bretonneau was the first to demonstrate the specific infectious nature of diphtheria. He did for diphtheria what Louis and others had done in regard to typhoid fever. Louis united in one group diseases which had previously been considered as of a different character, and were known under numerous and varied denominations. Thanks to his anatomical researches, the putrid, malignant, mucous, adynamic and ataxic fevers of olden times were reduced to a *unity*, which he named *typhoid fever*. He demonstrated that those fevers were only forms of one malady, having constant characteristic morbid lesions in the intestines. Louis' views and nomenclatures have ever since been adopted all over the world. Such has been the case with Bretonneau's discovery. The name given by him to the disease is now used in every

country, and his views and opinions in regard to it have been adopted almost universally, as will be seen hereafter.

After the classical memoirs of Bretonneau came the writings of Trousseau, Gaussart, Bricheteau, Bauchat, Blache, and others, which threw the greatest light on the nature, symptoms and treatment of diphtheria. All these authors believe in the identity of croup and diphtheria.

In Italy, the almost universal opinion of the profession is that the two affections are one and identical, only varying in its localization—at one time generally affecting the throat and extending or not to the larynx and trachea; at others affecting primarily the latter organ, or the nose or the denuded skin.

Coming to English, American and German authors, we see that Sir Morrell Mackenzie, of world-wide reputation, considers croup and diphtheria identical. He says: "I entertain the view that croup is only a form of diphtheria in which the local expression is found in the larynx and trachea, as it often is in the nares (with or without its occurrence in other parts)."

Sir William Jenner, the great clinical teacher (1875), and also the renowned Traube, of Germany, considers the two diseases as one and identical.

J. Lewis Smith, M.D. (Sajou's Annual, 1889, Vol. I.), speaking of diphtheria, says that croup is but one form of the same disease.

W. P. Marthrop, M.D. (Keating's Cyclopædia of Diseases of Children, 1890), says: "It seems advisable, therefore, to consider all cases of pseudo-membranous laryngitis, not of traumatic origin, as local manifestations of diphtheria."

Loomis and Lennox Brown are among the few that consider them different diseases. Drs. Hillier, Semple and Johnson, of England, all advocate with great earnestness and ability the doctrine of identity of the two diseases.

We now come to the opinion and practice of Boards of Health in our own country. Their official action in regard to diphtheria is of particular interest to us, sanitarians, whose duty, like theirs, is the protection of the public health, of more practical interest even than opinions of individuals, however eminent they may be.

We read in the report of the State Board of Health of Maine for 1890: "Membranous croup is now generally regarded as diphtheria of the air passages, and the same precautions are applicable to it as in ordinary diphtheria."

In date of March 21, 1891, Dr. Benjamin Lee, secretary State Board of Health of Pennsylvania, writes as follows to Dr. Formento:

"DEAR DOCTOR—Replying to your favor of the 18th inst., I have to say, first, that our Board, and especially myself individually, believe in the identity of membranous croup and diphtheritic croup. Second, that I believe that membranous croup, when not caused by some powerful chemical irritant, is generally due to diphtheritic poison. Third, our Board advises all local boards to place membranous croup on its list of infectious diseases and to require physicians to report it. I am glad to see that your State Board of Health is alive to the importance of this question, and trust that its action will be in the affirmative."

In the biennial report of the State Board of Health of California for the years 1889 and 1890, we find the following interesting statement: "During the fiscal year 1889-90, the deaths from diphtheria numbered 225, which added to 130 from membranous croup makes the sum total from these *twin* diseases 355. Croup caused the deaths of 135 children, the majority being under ten years of age. As a rule whenever a case of croup was reported, diphtheria was found in its immediate neighborhood. The fact has been so often observed that the State Boards of Health of Michigan, Iowa, and some others, have adopted resolutions to the effect that for sanitary purposes, membranous croup shall be considered identical with diphtheria, and that it be included in the list of contagious diseases. Nearly all the German authorities take the view of the unity of croup and diphtheria. We think it unquestionable, however, that there are cases of membranous croup which have no etiological relationship to diphtheria; but as we have no trustworthy means of diagnosing these cases from those of diphtheria, the safest course for us to pursue is to consider them diphtheritic and surround them with all the precautions we would use if we knew them to be of diphtheritic origin."

No words could better express the views of your committee on this important question. The motion "to report all cases of croup" was inspired precisely by the knowledge of the difficulties of diagnosis, and the consideration of the facts above stated. We could here submit our case, without further argument, to use the expression of our legal brethren. We think we have fully demonstrated that o th identity of membranous croup and diphtheria is shared by the

majority of medical authorities and practitioners, or, to use the modest and milder language of the preamble of the resolution, that cases of membranous croup are considered by many physicians as cases of true diphtheria. This being admitted, the most elementary prudence and regard for the welfare of the public health make it a duty to adopt the resolution.

As a report on a purely medical topic will not be complete without some medical argument, in addition to the authorities above cited, your committee will be pardoned for saying that the supposed pathological and alleged clinical differences on which rest the duality theory are not founded on facts and can be easily refuted. There is no apparent naked eye differentiation possible between the croupous and diphtheritic membranes—none, at least, that can not be satisfactorily explained by the difference in the structure of the parts on which they are thrown out. Nor have microscopical observers been able to differentiate the two diseases. The bacillus diphthericus of Loeffler, the only recognized micro-organism of diphtheria, has been found present in the sputa or membranes of membranous croup. As to the clinical differences said to exist between the two diseases, they admit of ready explanation. The difference in the anatomy of the parts affected and of the lymphatic glands in direct connection with them account for some of the secondary symptoms and for the more or less liability to general infection. In cases, however, where primary septic poisoning exists, the constitutional symptoms are as marked in one disease as in the other. Difference of localization, moreover, in a constitutional disease does not constitute a specific difference. To use the words of Sir Morrell Mackenzie, cancer is always cancer whether the pharynx alone or the larynx alone is affected, or whether both are attacked at the same time or consecutively, and rheumatism is still rheumatism whether it affects the heart or the ankle. Such is the case with diphtheria. We believe that pathologically, clinically and microscopically diphtheria and croup are, in the majority of cases, one identical affection, with different localizations, but generally affecting at the same time, or consecutively, both pharynx and larynx.

To suppose that there are two kinds of peculiar inflammation of the larynx—one in which the cause is the diphtheritic poison and the other in which the cause is some undiscovered influence—is totally opposed to all probabilities. (Mackenzie.)

In conclusion, we will mention two cases that came recently under our personal observation.

One of us was called, a few weeks ago, to attend a child in a private family unknown to him, and to whom he was called for the first time. The child was found to be in the last stage of membranous croup. False membranes, presenting the form and appearance of round macaroni, had been expelled in violent attacks of coughing. There was not the slightest sign of membranes in the throat or mouth. The child died, as was expected, the day following our first visit, and a few days after, we discovered that another child, brother of our patient, had died in the same house, attended by another physician, of membranous sore throat, or diphtheria.

In the other case, one of us was called in consultation for a young child, also in the last stage of croup, following an attack of measles. Tracheotomy was performed. During and after the operation, large shreds of false membranes were expelled, and the child recovered. A few days after, a child of the same family was attacked with a violent diphtheritic angina, the larynx was not involved, and that child also recovered. We then learned for the first time that a few days before the first child attended by us had fallen sick, another child had died in that family of angine couenneuse, terminating in croup.

These facts, and others we could mention, prove conclusively that membranous sore throat or pharyngitis, and membranous laryngitis or croup, are, in the great majority of cases, but forms or localizations of the same disease, viz. : diphtheria, one form often giving rise to the other, and that we sanitarians should consider them practically as one disease, and surround them with the same sanitary precautions.

[Signed]

FELIX FORMENTO, M.D.

HENRY BEZOU, M.D.

When Dr. Formento had concluded, Mr. Clayton submitted a minority report. He apologized for expressing views opposite to those of the medical men of the committee, urging as his reason that many of the most prominent physicians did not believe that membranous croup was infectious or identical with diphtheria, and that they would refuse to report such cases among infectious diseases unless the authority of the courts was invoked. They would be willing, however, to take all precautions necessary to prevent the possible spread of the disease, and the minority report recommended that the action urged by the majority report be delayed, pending

a more thorough investigation of the subject. Both reports were received by the Board.

Mr. Clayton then proposed in lieu of Dr. Formento's motion that the Board simply request physicians to report cases of croup so that a record might be kept at the office and the authorities enabled, by reference to this, to locate all of these cases and determine whether there was any truth in the idea that cases of croup either precede or follow diphtheria in a given locality. Col. J. D. Hill was opposed to both resolutions. He said that Dr. Formento had shown that though many medical men believed in the identity of these diseases, still there were others who did not, and as the medical profession was not at all unanimous the Board might do a great wrong to those in whose houses croup existed by demanding admission and subjecting them to a great annoyance.

Colonel Hill viewed the question from the standpoint of a lawyer, and to him it was a question of personal right. If there were a case of croup in his house and his family physician, on whose opinion he relied entirely, did not consider the disease contagious, he would feel that his rights were being trodden upon. As long, then, as physicians differ, it had better be left to individual members of the profession as to whether there should be disinfection after cases of croup.

Colonel Hill moved that both resolutions be tabled, and this was seconded by Dr. Kells. A motion to table can not be discussed, but as others wished to express their views, it was tacitly understood that they could do so.

Dr. Bezou said that in concurring with Dr. Formento he did so, not as a simple matter of opinion, but from profound conviction. One of the cases referred to in the report was one that he had treated, and he remembered, over a long period of years, having seen other cases of diphtheria follow so-called membranous croup.

Dr. Formento advocated with considerable fervor the resolution he had offered, stating that although doctors did differ the authorities he had cited were the men who had studied this question most deeply—the men who led and gave public opinion in the medical world. It was a question for this Board to decide. They were the custodians of the people's health, the sanitary authorities, and if they directed physicians to report cases of membranous croup, they would do so. It was well known that measles produced more deaths in New Orleans than scarlatina, and if this Board directed

physicians to report cases of measles this disease would be reported.

The President (Dr. Olliphant) was asked for his opinion.

Dr. Olliphant stated that he believed the two diseases to be quite different. This had always been his opinion, and his views were the same as those of a well-known New York authority, Dr. Loomis. (Dr. Formento here stated that he had cited the views of Dr. Loomis in his report.)

Dr. Olliphant thought that the diseases differed in location, clinical history and mode of death. Croup was a local disease, while diphtheria was a blood disease. He desired to be placed on record as believing in the duality of the diseases.

Mr. Holloway called for the motion to table both resolutions. This was put by the President, and carried by the following vote: Yeas—Hill, King, Holloway, Kells. Nays—Formento, Bezou, Clayton. Colonel Hill then moved that the question be referred to and decided by the board of experts, but the motion was lost.

Cases of membranous croup will be neither reported nor disinfected.—*New Orleans Medical and Surgical Journal*.

Neuralgia Secondary to La Grippe.

BY JOSEPH M. PATTON, M.D.,

Professor of Clinical Medicine in the Chicago Polyclinic, Chicago, Illinois.

Gentlemen :—This lady came to the clinic about a week ago complaining of neuralgia of about two weeks' duration. Now, we know that the ordinary person terms everything that is painful neuralgia, but when she describes the pain by running the finger down the line of the sternomastoid, down the anterior border of the trapezius, over the deltoid and over the extensor muscles of the forearm, of course we begin to doubt its being neuralgia. Neuralgia is an acute pain which is located along the course of one of the nerves. If it is neuralgia, you can determine the exact nerve to which the trouble belongs. For instance, if an individual has neuralgia of one of the branches of the fifth nerve, it will be located over the portion supplied by that nerve. If it is the first branch, you will have pain over the temple and around the ear, over the top of the head; if it is of the second branch of the trigeminus, you will have pain over the malar bone, down along the affected side of the nose, and perhaps extending down to the jaw. If it is the third branch, you

will have pain in the jaw radiating down under the chin. If there be neuralgia of the cervical nerves, you will have pain radiating from the back of the neck around towards the front or down towards the shoulder; and if it is the intercostal nerves, or the nerves of the arm, you will have pain following the course supplied by these nerves. If the neuralgia is due to an affection of the nerve, an inflammatory condition of the nerve, you will generally be able to locate some sore spot. In neuralgia of the second branch of the fifth, if it is due to an inflammatory condition of the nerve, you will find a sore spot in front of the ear or immediately below the eye or just below the center of the malar prominence. If you touch these branches of nerves, you will have severe pain; there will be some tender spot; you may have just as severe pain in one of these nerves without any sore spot whatever. When you place your finger in the region of the affected spot, there is soreness which extends along the muscles of the neck and shoulder. She complains of severe pain when we put the cervical muscles on the stretch. It has the appearance of a rheumatic affection of the muscles rather than of neuralgia. She tells us that some two or three weeks ago she had an attack of the grip, and after recovering in a measure from that she became afflicted with this pain. Now, neuralgias and rheumatic pains in the muscles and tendons are often secondary consequences of the grip. I have seen two or three most severe neuralgias secondary to attacks of the grip this winter. They are not what you might call true neuralgias, that is, they are not due to an inflammatory condition of the nerves; they are apparently rheumatic in character, and are relieved by rheumatic remedies. One case was under my care two or three weeks ago, following a moderately severe attack of the grip. It was a case of neuralgia of the second branch of the fifth nerve, with no tender spots especially. The face was sore over the nervous foramina and was entirely unrelieved by any of the neuralgic remedies.

All those remedies which are said to be efficacious in neuralgias of the fifth nerve, such as gelsemium, aconite, aconitine, cimicifuga, the ordinary neuralgic pills—all of those remedies from which you would expect effect in neuralgias of the fifth nerve—were entirely ineffectual. You will find that the pain is relieved temporarily, but not sufficiently so to do any good. The pain in this case was relieved by salicylate of soda administered in large doses, twenty grains

every two hours. The pain disappeared promptly, and, under its continued use for two or three days, failed to return. There were no unpleasant effects from its use. Ordinarily, such large doses of salicylate of soda will cause unpleasant effects in most patients, such as dizziness, tinnitus aurium, headache.

Now, the point to bear in mind in these neuralgic and rheumatic pains that result from the grip, is that they are not, as a rule, true neuralgias, they do not result from inflammatory conditions of the nerve, but are systemic conditions, and are best relieved by some anti-rheumatic remedies. This woman has been taking bromide of quinine and phenacetine, two grains of quinine with five or six grains of phenacetine, every two or three hours. While that relieves the pain while she takes it, the soreness of the muscles is much better, but still persists.

In using these synthetical remedies for pains, as a rule, if you do not get response to the administration of them within a few hours, it is best not to expect any result from them; if they do not promptly relieve the symptoms, they fail, and if they afford relief at all, it is within a few hours. As this soreness still persists, I think this patient will do better on salicylates than anti-rheumatic remedies. I would prescribe for her, to-day, ten grains of the salicylate of soda, every two or three hours, according to the way in which her stomach will bear it. In some people it is an irritating medicine to administer as far as the stomach is concerned, and you have to be careful, especially in women, and give it largely diluted in water. I expect that will relieve her trouble better than anything else.

This lady is another victim of the current affliction. She had the grip about two or three weeks ago—a slight attack of it—and since that time has been complaining of weakness. She feels almost too weak to go about—no ambition. She also has some pain in her limbs and arms and in the back of her neck. You will notice in regard to the pains that are complained of in these attacks of the grip, barring the headache, that they are, as a rule, confined to the tendons of the cervical region and the lumbar region, with some pains in the limbs. These pains are sometimes very severe in the cervical region, and also in the lumbar region, with no special stiffness of the muscles. Her trouble now is probably the weakness that is complained of. It is somewhat surprising the amount of physical weakness which will follow a com-

paratively slight attack of the grip. This year the name influenza would hardly seem to apply to the disease, as there are very few cases that have exhibited any marked trouble with the mucous membranes; it is not the characteristic coryza or sneezing, or the suffused condition of the eyes or pharynx, that is complained of, nor the mucous membrane of the larynx, and there is not so much bronchial inflammation in the start, though that may follow as a secondary matter. This year the symptoms of influenza are entirely wanting, and the trouble consists generally in high temperature, great weakness and pain. The weakness which follows these attacks is not at all consistent with the amount of temperature or with the length of the attack. I have seen several cases where the temperature did not go above 101° , and where there was very little pain, and yet the secondary exhaustion following the attack would last from one to three weeks. Again, you see cases with a temperature of 103° or 104° with not very much pain, which seem to be well in a few days after the temperature goes down, so that the exhaustive effects depend upon the condition of the system of the patient, and not on the height of temperature or severity of attack.

The administration of remedies for the acute stage of this trouble may have something to do with the exhaustion which follows. It is fashionable to give antipyrine, acetanilid, phenacetine, antifebrin, with or without quinine, both because that is the fashion of the day, and because they are very efficient remedies for reducing fever and pain, at the same time they leave a depressing effect. Any of you who have administered antipyrine in marked doses in typhoid fever or pneumonia, or any of the acute exhaustive diseases, will have noticed that you get a more depressing effect from its prolonged use than in those cases in which these drugs are not used. These patients will take quinine for three or four days, and if they do not get much better, they will go to a physician, and he gives them as much antipyrine or acetanilid as they will stand, and by the time they are beginning to get well they complain of great exhaustion, due, perhaps in part, to the administration of these remedies; at any rate, there seems to be a great deal more exhaustion following the grip this year than I ever noticed before.

Another marked feature of the disease this year is the tendency to bowel trouble—catarrhal inflammation of the bowels. As a rule there is not much difficulty with the

stomach; the trouble seems to be with the intestines. The diarrhoea will begin with the active symptom of the disease, or will follow as the patient begins to get better; it is accompanied by considerable fermentation, a good deal of flatulence. The passages are frequent, thin, slightly greenish as a rule, showing evidences of imperfect digestion. That has been the case also with pneumonia. I have hardly seen a case of pneumonia this winter that has not been accompanied by diarrhoea—even the asthenic cases of pneumonia all have it, and in the other cases which occurred in people who were weak and feeble, they were also afflicted with it. For instance, a woman was under my care a short time ago who had had chronic bronchitis for years; she was very much run down in health; she had a croupous pneumonia of one lung, which got along fairly well, but the attack in her case was accompanied by diarrhoea during the course of the trouble. Another case, a strong, active young man of twenty, with double pneumonia, respiration 45, and pulse 140, temperature 104° , a very severe one, also developed diarrhoea about the time that the temperature began to drop. And so it ran through all the cases. I lost a case of pneumonia this morning in a young man of twenty-seven, where the trouble began with a gastritis, which I succeeded in relieving, when pleuro-pneumonia developed with an active diarrhoea all the time. This diarrhoea is not dependent upon what you feed the patient. I have kept them on an exclusive milk diet. I have fed them on beef peptonoids and beef extracts, and on broths; I tried every manner of diet, and it makes no difference. It seems to me some atmospheric condition.

As regards treating the exhaustion which follows attacks of the grip, of course much depends on the patient, the character of the attack, and the amount of food which they are able to take. They should be put on tonic treatment, and among the best things to feed these patients with are some of the tonic wines. Coca wine or Tokio wine, which is a good deal used just now, is very beneficial. The coca wine of Mariana & Co. is a nice preparation — one which I have used a good deal in these cases, one glassful two or three times a day. They respond to it nicely. It has a tonic action on the mucous membrane of the throat and larynx where there is troublesome cough, or hoarseness of the voice. They should be fed on light diet; that is, a diet from which the starches, sugars and fats are excluded, so that you will not have much transformation of sugar into glycogen, and

therefore there is not much chance for fermentation. For the tendency to fermentation and diarrhoea the best remedies are those which prevent intestinal fermentation, intestinal antiseptics. The old remedies, bismuth, or dilute mineral acids, are good. It is more fashionable now to use salol, naphthol, naphthaline, thymic acid, or some such preparations. Salol is a nice remedy, and should be given in five-grain doses in the form of a sugar-coated pill, one every three or four hours. You can use naphthol and naphthaline, if you so desire. Where there is fermentation in the stomach, one of the best remedies is a grain, or a grain and a half, of thymic acid, with five grains of charcoal in a capsule; it relieves fermentation nicely.

This patient complains principally now of flatulence, and not so much of diarrhoea. She says her bowels are not loose at the present time, but that the flatulence is the only trouble that bothers her. I would put her on one of these remedies—salol, for instance, with one of tonic wine, and expect her to regain strength quite rapidly.—*Med. and Surg. Reporter.*

A Not Uncommon Form of Puerperal Fever.

BY CHAUNCEY D. PALMER, M.D., CINCINNATI, OHIO,
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An ounce of prevention is worth a pound of cure.

So the old maxim declares, and so, no better illustration of this truism is afforded in medicine than here, in obstetric practice. How much more easy it is to prevent than it is to cure puerperal septicæmia. Since we have utilized the most modern improved methods of treatment, by way of prophylaxis, in the management of obstetrical cases, in the wards of the Cincinnati Hospital, where some two hundred and fifty (250) cases occur each year, it is extremely rare for us to have a case of pure, uncomplicated puerperal septicæmia. A few, very few, cases of puerperal septicæmia, associated with some pelvic inflammation, have been observed. Unquestionably, our prophylactic treatment has been serviceable in preventing this dread and fatal disease. Our mortality rates have been decidedly less than what occurs in ordinary private practice, and are now comparing very favorably with those occurring in the best maternities

of this country. Every case of puerperal sepsis the writer has been called to see, in the last two years, has been in private practice in consultation, where prophylactic means had not been utilized. It is not very uncommon for us to notice febrile movements, at times quite severe in degree, where there have been, and are, no pelvic or abdominal complications of any kind. There is fever in the puerperal state, but it is evidently not puerperal fever, so-called, or a puerperal septicæmia. Such cases, also, occasionally happen to me in my private practice.

Any chill, followed by fever, during the puerperal state, whether attended or not by abdominal pain and tenderness, is a serious matter, especially at this time, for it always excites apprehensions of a grave character with patient, friends and physician, not only as to possibilities but also probabilities. Grave in proportion to the frequency and severity of the chills, the degree of temperature elevation, and the earliness in which these symptoms are manifested after the parturient act. Quite oftentimes the diagnosis is very clear and unquestioned that the symptoms are septic in character; but, occasionally, the diagnosis is only inferential or presumptive. The treatment employed is, at times, of considerable diagnostic value.

My friend, Dr. Fordyce Barker, of New York, was among the first to observe and write concerning a not uncommon manifestation of puerperal fever of the malarial type. His valuable article on this subject may be found in Vol. XIII. of the *American Journal of Obstetrics* for 1880.

It must be admitted that pregnancy, probably from the vascular changes, providentially has fortified the system at large against the inception and development of many diseases. This is true in reference not only to malaria in its manifold manifestations, but also all the acute infectious diseases, as scarlet fever, measles, typhoid fever, diphtheria, erysipelas, etc. But, just so soon as pregnancy is followed by parturition, the whole systemic condition undergoes a change, owing probably to the exhaustion of the system from parturition, in its prolonged muscular exertion, loss of blood and loss of sleep. A former non-susceptibility is now transformed into a special susceptibility. Systemic poisons, which possibly were received in pregnancy, now begin to show their characteristic effects. And, without doubt, owing to the aforementioned causes, and owing to special soft structure injuries from laceration, and owing to the

physiological, apparently now the pathological condition of the uterine cavity, at the former site of the delivered placenta, all of these special poisons are more easily received within the circulation. Women who live and are delivered in malarial climates and seasons and locations, those who are ordinarily subject to malarial morbid conditions, are most susceptible to this form of a puerperal fever. It may manifest itself in less than twenty-four hours after delivery. This is certainly very rare, and the occurrence of a chill, followed by a fever, within the first day following delivery, is *per se* a most significant indication of a septic infection. Again, it may develop itself at any time, as late as the twenty-first day after parturition. So it generally does. Any chill, followed by fever, or any febrile movement, not resultant upon pelvic inflammations, coming on after the third day, especially the fifth day, after parturition, is generally malarial.

There may be several chills purely malarial. The most severe types of puerperal sepsis the author has ever witnessed were attended by frequent, irregularly recurring and severe chills. The temperature in either condition may be quite high. Frequently has the author observed it to be 105.5° F. in malarial puerperal fever, from telluric or atmospheric causes; but it generally remits materially in the morning and exacerbates in the afternoon or evening, while puerperal fever proper, septic in kind, associated with a uterine phlebitis, a metritis, a pelvic lymphangitis, shows less morning remission, and may demonstrate a diurnal temperature with maximum elevation in the morning.

Of course there is no pelvic pain or tenderness in puerperal malarial fevers; the lochia is unaffected, and the milk secretion remains normal. There is always considerable backache, pain in the limbs and head. Puerperal sepsis in its many forms is, of course, most apt to show itself after tedious deliveries, when the perineum, vagina and cervix uteri have been lacerated. On the other hand, two of the most pronounced severe cases of puerperal fever the author has ever witnessed—cases in which chills occurred early—repeated themselves frequently and irregularly, as to time and severity, with very high temperature elevations, occurred in one case without any soft tissue laceration of any kind or place, and with but slight perineal laceration in the other, in both of which there was no pelvic or abdominal pain or tenderness. Both proved fatal, and seemed over-

whelmed at the start. One happened in the author's practice before the now-used prophylactic means were employed. The other was seen in consultation in a neighboring town, having passed through labor promptly and naturally. The prognosis of a case of puerperal fever largely depends upon the *time* of its manifestation. If it commences within a few hours, or very few days, after delivery, the prognosis is almost surely fatal.

As to the treatment of puerperal malarial fever, little need be written. The author has experienced great benefits from the administration of quinine in grs x, every five hours, as an antimalarial, antiperiodic and antipyretic. This medicine is administered, for the most part, during the febrile remission, if any, while dependence has largely been placed upon the use of the salicylate of sodium, in from grs v-x, largely diluted, during the febrile exacerbation. A short period of time—less than forty-eight hours—will usually corroborate any presumptive evidences of diagnosis as to the nature of the disease. The nature of the treatment in this disease, as in some other diseases in all our practice, becomes highly instructive, not only therapeutically, but diagnostically. The employment of the most potent antipyretics, as antifebrin, antipyrine, etc., is of very questionable propriety in any form of puerperal fever, malarial, isepctic or inflammatory. While they will reduce the high temperature, their influence in so doing is of very questionable utility. High temperatures, here as elsewhere, in disease, are but a single symptom, and their reduction by no means indicates an improvement in the physical condition of the suffering patient. The temperature may be knocked down, as it were, to or about normal, and yet the patient die. Quinia in considerable doses, administered not oftener than once in five hours, not only reduces temperatures when abnormally elevated, but it also sustains the heart's action, increases the somatic resistance; and should there be anything of the malarial element in the disease, it becomes the remedy par excellence. The salicylate of sodium is feebly antipyretic, somewhat antimalarial and highly antiseptic.

Suitable fluid nourishment is always called for, and alcohol in some form, preferably in the form of whisky, diluted, is frequently materially beneficial.

This is not the time or place for me to write, except incidentally, concerning the causes, diagnosis and treatment of puerperal fever proper.—*Journal of Gynecology*.

Neuroses of the Genito-Urinary Apparatus.

The term genito-urinary neuroses is properly limited to cases of purely functional derangement of the genito-urinary organs dependent upon pathological conditions of neighboring organs and conditions—probably of a spasmodic character—immediately dependent upon organic lesions of some portion of the genito-urinary tract itself. There are few morbid conditions of a functional character which are so trying to the patient or so embarrassing to the surgeon, and in the experience of physicians it is found that they are apt to be more often consulted regarding these functional nervous derangements than for the actual diseases upon which they depend. In view of the vast amount of labor and talent that has been devoted to the study of the reflex neuroses of women incidental to pathological conditions of the uterus and its adnexa, it is surprising that more attention has not been given to analogous conditions in the male, due to disturbances of the generative organs, and especially of the urethra.

Taking as the point of departure the prostate, there will be found a close similarity between some of the morbid states affecting it and certain pathological conditions of the uterus. Anatomically and physiologically the prostate strongly resembles the uterus. The tendency of the muscular tissue to undergo degeneration, and form fibro-myomatous growths, is strikingly like that observed in the case of the uterus. It will be found that certain remedies which have a marked action upon the unstriated muscular fiber of the uterus have a somewhat similar action upon the prostate, this being especially true of the ergots of rye and corn and hamamelis. Certain sedative remedies have a special controlling effect upon irritative affections of the uterus, ovaries and prostate alike. Carrying the argument a little further, it will be found that certain irritations of the prostate produce effects very like that induced by utero-ovarian irritation in women. False spermatorrhœa—spermatophobia—pseudo-impotency, involving disgust for the sexual act, melancholia, hypochondria, neuralgias, whether of contagious or remote nervous filaments and nervous inhibition, amounting almost to complete paralysis, are all possible results of urethral or prostatic irritation, and these conditions are all represented by very similar disturbances, such as hysteria and its con-

geners, in the female, due to morbid conditions of the generative organs.

One of the interesting features of stricture of the urethra is the ensemble of symptoms of a nervous character that is so often seen, these neuroses being often entirely disproportionate to the degree of organic trouble present. Cephalalgia, neuralgia in various localities, particularly sciatica, lumbar and intercostal neuralgia, are quite common, but are probably regarded by both physician and patient as coincidences rather than as bearing any consequential relation to the stricture. Associated with these symptoms are others, quite as prominent in some cases, of a purely mental character, such as melancholia, disturbed sleep, hypochondria, incapacity for intellectual effort and deterioration of business capacity, perhaps associated with great irritability of temper. Disturbed digestion and general impairment of nutrition are quite constant. That these various abnormal conditions depend upon the stricture, is never appreciated fully until that organic disease is cured, when the complete restoration to health demonstrates their true relation to the primary source of irritation. Some cases of gleet are associated with considerable mental depression, which is commonly ascribed to the moral effect and the supposed drain upon the system. This lack of mental equilibrium may arise from reflex irritation through the sympathetic system, which is so closely allied with the functions and nutrition of the sexual organs. Morbid conditions of the urethra not only cause reflex neuroses in other portions of the body, but they are frequently the reflex result of disease of contiguous strictures. Thus we have noted cases of spasmodic stricture depend upon hernia and varicocele, and Dr. Otis has described some very interesting cases of chronic spasmodic stricture of reflex origin. Operations about the anus are frequently followed by spasmodic stricture and consequent urinary retention, and morbid conditions of the interior portion of the urethra often cause reflex disturbances of the deeper portion of the canal or indeed of the bladder. This is very familiar in connection with the results of contraction of the meatus.—*Western Med. Reporter.*

TACITUS, the celebrated Latin historian, says that "a man hates the one he has injured." We will add that he hates such a one more than he hates one who has injured him.

Somnal—A Hypnotic.

BY IRVING D. WILTROUT, M.D.,

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Since I have been placed on the Committee on New Remedies, and in view of the fact that I am always desirous to keep up the interest of this Society by promptly responding to any task that may be set before me, I write this brief paper on a remedy that is not perhaps new to all of you, but some of you may not yet have tested its merits in that most annoying and often intractable symptom—insomnia.

The remedy I refer to is somnal. I show you here a sample of it. It is, as you see, a colorless liquid, resembling chloroform in its appearance and behavior when added to cold water, in which it forms globules, and refuses to mix or dissolve. When shaken with water the mixture is milky, but quickly separates. It is soluble in hot water and alcoholic solutions, and dissolves resinous substances and fats. The odor is rather delightful, and resembles somewhat that of spirits of nitrous ether. The taste is pungent; and for administration it needs free dilution. When whiskey is not objectionable, or alcohol, it can be dissolved in either, to which water can then be added until the taste is not unpleasant. The taste can be disguised well in syrup of ginger, or licorice.

Somnal is inflammable, and burns with a flame resembling alcohol. Somnal can be said to be a new remedy, for it was first brought to notice by Radlauer, of Berlin, in the fall of 1889. It is formed by the union of chloral, alcohol and urethane; but it is not simply a mixture of these bodies. It differs from chloral-urethane by the addition of $C_2 H_4$, its formula being $C_7 H_{12} Cl_3 O_3 N$. The dose ranges from fifteen to thirty drops. In its action it resembles chloral in quickness of effect and naturalness of the sleep produced. No marked depressing influence is exerted upon the pulse or respiration, though it is noticed that the breathing becomes slower, and the pulse slower and fuller, as in natural sleep.

I have used this drug in upwards of thirty cases, and in no instances did I find any disagreeable after-effects. The head remains clear on waking, and the stomach unaffected. No constipating or relaxing effect follows its issue. The kidneys

are slightly quickened. No increase of dose is called for, however long you use the remedy. Usually two doses are sufficient. I have the habit of giving the first dose at eight o'clock, and the second at ten. A night's rest usually follows. In aggravated cases of insomnia I order a third dose administered at 2 A.M. if the patient is wakeful.

The sleep is very natural. It does not, like chloral, depress the heart, irritate the stomach and produce morning drowsiness, or disturb the gait, dull the sensibilities and irritate the stomach, which is often the case when sufonal is used. In a form of insomnia which accompanies general neuralgic pains, this remedy almost invariably relieves the pain and provokes a restful sleep.

In the fretfulness of nervous people who can not sleep, as in certain cases of melancholia agitata, hysteria, hypochondria and puerperal mania, I have found this remedy preferable to any other.

I have no experience in using this drug in the sleeplessness of children, nor have I witnessed its results in the acute febrile diseases. I believe that this remedy stimulates the gastric mucous membrane, and by so doing relieves nausea and pain often, and improves the appetite, and regulates the bowels.

Its power of relieving nausea and accumulations of gas in the stomach is very pronounced. I have in three instances administered it in small doses during the day for this purpose. The results were exceedingly satisfactory. As it is rapidly eliminated from the body it may be administered each night for a number of days without any possibility of ill effects.

I am fond of old remedies ; I take up new ones cautiously ; but in my efforts to give refreshing and restful sleep to the sleepless and worn-out nervous cases that come under my call, I was ready to put this new remedy into immediate use, and I have done so with the results given above.—*N. W. Lancet.*

The Mortality from Chloroform Narcosis.

The question of the relative safety of ether and chloroform is pretty well settled in the minds of most surgeons. Yet as long as it is settled in an exactly opposite way by Americans and Europeans, the matter will continue to be discussed with interest.

The prevailing belief is that statistics will show about one death in 25,000 anæsthetizations for ether, and one in 2,500 for chloroform.

Dr. Weir, however, from a careful study of the New York Hospital statistics, found that the ratio of deaths from ether was six in 12,000 operations, or one to 2,000, a very much higher rate.

Some statistics of great interest have just been collected by Professor Gurlt and reported before the German Surgical Congress. The figures were obtained from sixty-six hospitals, mostly in Germany, and including the Berlin Charité.

Deducting (for some reason) the Charité figures, 24,675 cases of anæsthetization were reported. Of the whole number, 22,656 were with chloroform, 470 with ether, 1,055 with ether *plus* chloroform, 470 with ether *plus* chloroform *plus* alcohol, and 27 with bromide of ethyl. Among the chloroform cases 71 cases of threatened asphyxia and 6 deaths occurred; among the ether cases, none even of danger; among the ether-chloroform cases, 5 of danger; among the ether-chloroform-alcohol cases, 4 of danger; among the bromide of ethyl cases, none. The chloroform used was obtained mostly from German and English chloral factories. Of 2,732 narcoses, 278 lasted an hour or more. The three longest lasted 150, 155 and 180 minutes. The average consumption of chloroform with the ordinary mask was one gramme per minute; with the Junker-Kappler mask, 0.6 of a gramme. One private clinic reckoned the average consumption at twenty-five grammes per case; the maximum consumption was 180 grammes. Some of the reporters increased the narcosis by injecting morphia. The threatening of asphyxia occurred in patients of all ages and degrees of strength.

The six deaths among 22,656 cases of chloroform narcosis make the ratio about one to 3,700. This is lower than that obtained for ether from the records of the New York Hospital.

A recent article by Professor Kocher (*Correspondenz-Blatt f. Schweizer Aerzte*) sums up very well the views of an experienced surgeon, and shows that in some European clinics, at least, ether is gaining ground. Kocher says: 1, As a rule, no attempt to produce general anæsthesia should be made without close examination and thorough preparation of the patient; 2, it is advisable, and in many cases neces-

sary, before administering an anæsthetic, to arouse the action of the heart by giving alcohol or some other stimulant; 3, the patient should always be laid in the horizontal position; 4, chloroform should never be given in cases in which the patient has not been sufficiently prepared; in tooth extraction, reduction or dislocation, and, indeed, most minor surgical operations, ether should always be substituted for chloroform; 5, in cases of cardiac disease and of disturbance of the heart's action not associated with respiratory disturbances, ether should be given and not chloroform; 6, in patients suffering from diseases of the respiratory organs, associated with hyperæmiæ of the tracheal and bronchial mucous membrane, ether should be rejected and chloroform administered in its place; 7, in cases of prolonged surgical operation chloroform should be carefully administered at first, the state of anæsthesia being subsequently maintained by the continuous inhalation of small quantities of ether; 8, the inspired air should never be allowed to become saturated with the vapor of chloroform; 9, when, in any case in which the operation is likely to be a long one, the administration of ether is contra-indicated and chloroform must consequently be used, a previous injection of morphine should be practised in order that anæsthesia may be produced by a smaller quantity of this agent.—*Med. Record.*

Laryngology.

EXCISION OF THE THYROID FOR MALIGNANT DISEASE. RECOVERY.—*The Lancet.*—A blacksmith, fifty years of age, a native of Buckinghamshire, was admitted to the hospital in March, 1890, with an enlarged thyroid. He had noticed the swelling about ten years before, but upon consultation it was stated to him that it was simply an enlarged gland, and he painted it with iodine. This did not prevent the swelling from increasing, and for some months before his admission, he had been unable to partake of solid food.

Upon examination there was found a huge lobulated tumor in the front of the neck, larger on right than left side, and extending upward behind the angle of the jaw on either side, downward as low as the sternum and clavicles, and backward to the level of the ears. It moved with the trachea on swallowing, and the lobes on either side of the neck were connected by a central enlargement passing over the front of

the windpipe. All the lobes were lobulated, simulating enlarged lymphatic glands, somewhat elastic and the right quite tender. The measurements of the neck showed twenty and three-fourth inches around the largest portion of the tumor. Owing to the pressure of the growth on the trachea, there was stertorous breathing and the radiating pains in the neck caused considerable headache. As the tumor showed signs of rapid growth it was decided to operate for its removal, commencing with the right lobe.

Three weeks after his entrance an anæsthetic was administered and a longitudinal incision about five inches long was made in the middle line of the neck, the tissues divided until the gland was reached, and as it was found impossible to remove the gland through the incision, a further one was made three inches long, starting from the upper extremity of the first incision and in a direction parallel to the ramus of the jaw on the right side. This flap of skin, with platysma, fascia, etc., was dissected from the gland and turned outward. The sterno-hyoid muscle was pulled over to the left, but the sterno-thyroid and omohyoid, which were thinned out over the tumor, were divided and the right lobe thus fully exposed was slowly dissected out in its capsule, the bleeding vessels being ligatured as they were divided. After this was completed, and the gland freed of all connections except the enlarged isthmus, this structure was ligatured and divided and the right lobe thus removed. A huge cavity remained, bounded posteriorly by the carotid sheath throughout its whole length, while below the pleura could be seen rising with each inspiration. The larynx and trachea were flattened out and twisted over to the right side, and the wound washed out with boracic acid solution, the edges united by silk gut sutures, and a dressing of iodoform gauze and absorbent wool applied. There was but little hemorrhage following the operation, and small rise of temperature, the wound healing by first intention, and in seven days patient was able to leave his bed. In two weeks he returned home, and when he presented himself for examination in four weeks, stated he was able to take solid food, with no trouble whatever of his breathing, and his health since operation had been excellent.

It now being decided to remove the left side of the tumor, it was done in exactly the same manner as previous operation; on this side, however, the superior thyroid vessels were

much smaller and the inferior larger than were met with on right side. The recurrent laryngeal nerve was seen underneath the tumor and avoided. This operation was followed by the same success in healing as the former, and the man left for his home three weeks afterward, quite recovered, the circumference of his neck being but fourteen and one-half inches.

Some Experimental and Clinical Observations Upon the Therapeutical Value of Salicylbromanilid.

BY C. S. BRADFUTE, M.D.,

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Among the new remedies lately introduced from Germany is one from Radlauer's laboratory, a synthetical compound, to which he has given the name "antinervin," or, with a view of indicating its chemical composition, "salicylbromanilid." The former is its proprietary title. It is a combination of bromacetanilid and salicylanilid, and is claimed to possess the virtues of antifibrin, bromine and salicylic acid, without their unpleasant effects, and is, consequently, an antipyretic, an antineuralgic and an antinervine. It is a white, crystalline powder, having a rather pleasant, slightly acid taste, feebly soluble in cold water, but dissolves freely in hot water, alcohol and ether. The dose is from three to ten grains and is best given in the form of compressed tablets or in simple powders. The writer takes the liberty of suggesting that its chemical name be abbreviated, as it seems unnecessarily long; it could be easily called "salbromalid," which would accomplish the object of brevity, and, at the same time, sufficiently indicate the chemical nature of the compound.

A glance at the physiological action of the three agents comprising salicylbromanilid, shows that they are essentially circulatory depressants. Salicylic acid acts directly on the heart muscle, lessening its electrocontractility, and, when administered in toxic doses, causing the organ to stop in diastole. After a preliminary period of stimulation, it depresses the vaso-motor centers. Antifebrin acts very similarly, though its effect upon the heart and vessels is more powerful, producing a rapid fall in the blood-pressure and a weak and irregular heart. Bromine, in addition to its im-

pression upon the heart and vaso-motor nervous system, lowers the vital activity of the centers in the *medulla oblongata*, and interferes with the function of conscious cerebration in a way not yet clearly understood.

It can thus be seen that a compound made up of these three substances, when given in full physiological doses, would probably exhibit an action upon the system manifested by a profound interference with the motor mechanism of the circulatory apparatus, and that whatever therapeutical value could be attached to it, from a pharmacological standpoint, would depend upon this action.

In a series of experiments conducted in the therapeutical laboratory in the Jefferson Medical College, the writer's observations were confirmatory of the above remarks. He found antinervin a profound depressant of the circulation, and a prompt antipyretic. Three grains ejected into the lymph sac of a medium-sized frog produced death in one hour without convulsions, the animal becoming languid and indifferent to mild stimulation after a lapse of ten minutes, and passing rapidly into stupor, and finally died in a condition of coma with the muscular system completely relaxed. The relaxes gradually diminished during the course of the poisoning and were totally absent eight minutes before the cessation of the circulation.

A similar quantity was injected into a frog so prepared that the movements of the heart could be observed *in situ* and the capillary circulation watched under the microscope. The cardiac cycle was observed to gradually and uniformly become longer, the contractions lessened in vigor, the ventricle contracted more slowly than the auricles, reacting lazily to an electric current, and finally the heart stopped in diastole, spreading out like mush when removed from the body and placed upon a glass plate. The capillaries dilated, slowly and irregularly at first, but fifteen minutes before death relaxed entirely, and the blood current diminished in rapidity in proportion to the capillary paresis and the cardiac depression, the corpuscles tumbling along against each other and showing a tendency to adhere to the vessel wall. Death occurred in forty-six minutes.

The behavior of the heart in the above experiment indicated the poisonous effect of the drug directly upon the organ, but in order to prove this the heart of a healthy bac-trachian was taken out of the body and placed in a Kronecker-Bowditch apparatus. Here, removed from the influence of

the central nervous system, a solution of antinervin was permitted to flow, by means of a perfusion canula introduced into the ventricle, slowly through the heart, and the results observed were the same as those noted when the heart was *in situ*. A control experiment eliminated any undue influence upon the heart from the damage it sustained in placing it in the apparatus.

Upon the rabbit the drug acts very much the same as upon the cold-blooded animal, and its influence over the respiratory movements, which is more distinct in warm-blooded animals, shows the part played by the salicylic acid in the general result. Respiration became rapid, weak, shallow, and stopped before the heart, the latter becoming slower and more feeble, and finally, a few minutes before the circulation ceased, would make no impression upon the drum of a cardiograph.

Guided by these experiments the writer concluded that salbromalid was best applicable to those affections characterized by functional disturbances of the circulatory system brought about by reflex impressions or too active stimulation, and acute inflammatory conditions occurring in robust subjects. In the cases that fell in his hands he found this conclusion correct, and noted favorable results, and in some instances obtained curative effects when other remedies had failed, or acted unsatisfactorily.

The following are a few of the cases in which he employed the remedy, and while they are not conclusive in establishing the therapeutical position of the drug, they may be accepted as indications for its administration.

Case 1. Angina pectoris. Male, aged 36; laborer. Has attacks of angina pectoris about twice a month. During paroxysm face is pale, extremities cold, arterial tension high, and pain so excruciating as to cause at times symptoms resembling acute mania. Ten grains of salbromalid caused relief of symptoms in about twenty minutes, and three grains every two hours afterwards prevented a recurrence of the paroxysm. The results were, of course, not permanent, as the patient still has attacks as frequently as ever, but the drug never fails to check a paroxysm. The writer enjoins a caution here in administering this drug in angina pectoris. It should not be given in asthenic cases, and there must always be at hand ammonia and strychnine to combat a failure in the circulation. A thirtieth of a grain of the latter hypodermatically, if the heart shows signs of ceasing work, is the proper dose.

Case 2. Typhoid fever, in second week. Male, aged 23; clerk. Temperature, 104.4° F.; pulse, 100; respiration, 24. Five grains of salbromalid reduced the temperature to 102.3° F. within one hour and a half. No bad results followed. Only one dose was administered to this case, as cold-sponging was sufficient to retain the temperature within safe limits, and it was not deemed advisable to tamper with a weak typhoid circulation.

Case 3. Brachial neuralgia of two weeks' duration. Female, aged 32; type-writer. Pain paroxysmal. Three grains of salbromalid, administered every three hours, caused the pain to disappear within twelve hours. This dosage was continued four days, and afterwards a course of arsenic and diet effected a permanent cure. This patient was robust, but of a neurotic temperament, and the neuralgic pain was evidently spasmodic in character. The following case presented the converse condition and it will be noticed that the drug was ineffective.

Case 4. Brachial neuralgia of three years' duration, probably rheumatic. Man, aged 41; engineer. In fair physical health, with a rather stolid, morose disposition. Suffers more or less continuous dull pains in left axillary and brachial regions, with occasional exacerbations. Ten-grain doses of salbromalid depressed the circulation, but exercised no appreciable control over the pain.

Case 5. Acute inflammatory rheumatism. Female, aged 37; cook. Temperature, 104° F.; pulse, 108; respiration, 26. Five grains of salbromalid reduced the temperature to 103° F., and diminished the general sense of discomfort and uneasiness. It was repeated in four hours, with the result of further reducing the temperature, but, also, of markedly depressing the circulation, and it was not again administered, as the patient developed pericarditis in a severe form on the fifth day. In this case the remedy would, undoubtedly, have acted better if it had been given in smaller doses.

Radlauer claims antinervin to be antidiabetic, but in one case of diabetes, in which the writer had an opportunity of employing it, no diminution was observed in the amount of water and sugar excreted, but, of course, one trial can not be accepted as conclusive evidence of its inutility in this affection. It is seen from what has been stated, that salbromalid is most effective as a pain reliever and antinervine in those functional disturbances of the circulatory system which occur at the onset of acute diseases, and in some other con-

ditions, manifested by an overacting heart and contraction of the arterioles, which lessens the total area of blood space, and that it is most effective in robust subjects. Its power to reduce the temperature is undoubted, but owing to its action upon the heart it should be given carefully in states of hyperpyrexia, especially the low fevers.

A New Substitute for Quinine.

We have become so accustomed to read every week or so of a new coal-tar derivative rival of quinine that it is really refreshing to hear of a vegetable substitute for this drug, and one is predisposed in its favor for the simple reason that it is not the product of some chemical laboratory.

The name of this new remedy—new, that is, to the Western world—is *halviva*, a substance prepared from *kreat*, an East India plant. Dr. G. Yeates Hunter, formerly Brigade Surgeon in the Bombay army, describes it in the *British Medical Journal* of March 7, 1891, and says that it has long been in use in India as a remedy for malaria and as a tonic and restorative. It possesses all the antimalarial properties of quinine, without apparently any of its disadvantages. It produces none of the head symptoms or nervous irritability so often seen after the long-continued use of quinine, while its therapeutic action is much more reliable. Again, *kreat* may be taken with great advantage, Dr. Hunter maintains, as a prophylactic, whilst the injudicious use of quinine for that purpose in malarial countries has resulted, in many instances, in marked deterioration of health. As a tonic, the writer declares, *halviva* is unrivaled, being a pure, clean bitter, without astringency, and acting as a gentle laxative by increasing the secretion of bile. It is of great service in indigestion accompanied by constipation, and is also useful in gouty dyspepsia.

Dr. Hunter does not speak of it as possessing any antipyretic properties, and it is probable that he refers to its use in the chronic forms of malarial poisoning rather than as a remedy for actual paludal fevers. So it would appear that we are not, after all, to be freed from the tyranny of the chemical laboratory, and phenylacetamide, dimethyloxychinizin, para-acet-phenetidin, tetrahydroparamethyloxychinoline (or tetrahydroparachinanisol), and other such like simples must yet be prescribed by the fever-fighter who puts not his faith in cold water.—*Medical Record*.

Proceedings of Societies.

Allegheny County Medical Society.

PAPER BY W. C. BANE, M.D.

Chlorate of Potassium in Phlyctenular Ulceration of the Cornea.

It is almost a century since chlorate of potassium was brought to the notice of the medical profession as a remedial agent. In 1795 Dr. Garnet, of England, used it in the treatment of disease. At one time it was lauded as almost a specific in many of the maladies to which mortal man is heir. However, years of clinical experience determined its real value, and it was assigned a place among the topical remedies. Though valuable when administered internally, in some conditions of the system it has its deleterious effects, having already caused forty-seven deaths. Its therapeutic properties may be stated generally as those suggested by its chemical constitution and affinities; as a salt exceptionally rich in oxygen, it has without decomposition, the valuable property, *per se* by its mere presence apparently, of oxygenating or aerating the blood, and so restoring or exalting this inherent quality of the circulating fluid, influencing to a corresponding degree nutrition and functional activity of the various tissues and organs of the body.

In ulcerative diseases chlorate of potassium has been thoroughly tested during the past forty years both internally and locally. Under Therapeutics, in the *North Amer. Medico. Chirurg. Review* for March, 1858, p. 387, Dr. Dethan regards chlorate of potash "as an especial and incontestible remedy in ulcero-membranous stomatitis * * its topical application is sufficient, and in a short time the mucous membrane recovers its normal qualities and functions."

Dr. Gallaher, of Pittsburg (*Am. Journal Med. Science*, July, 1857), lauded chlorate of potash in mercurial stomatitis, stating that, "should there be ulceration of any portion of the mucous membrane of the mouth, I desire a weak solution of the salt to be applied to the denuded part several times a day; generally nothing else is required, the cure being accomplished in a few days." As a local application in ulcers of the lower bowel, chlorate of potassium in solution gives excellent results, ulcers healing rapidly.

I presume chlorate of potassium has frequently been used as a local application in diseases of the eyes, but I have only found one record, that of Dr. Landesberg, of Philadelphia, using it as a topical application in epithelioma of the eyelids.

Ulcers of the cornea, especially the phlyctenular variety, are frequently met with, usually developing as a little papule or pustule on or near the margin of the cornea. They may develop independently or as a complication of some existing ophthalmia or catarrhal affection of the nares. A large percentage of the cases are strumous or scrofulous, consequently suffer from nasal catarrh.

The symptoms may vary as to their intensity, but we usually find photophobia, congestion and pain, the variation in the symptoms being influenced by the number of phlyctenules and the constitution of the patient. Constitutional treatment and regulation of the diet, etc., is invariably needed.

The first use I made of chlorate of potassium as a local remedy in ulcers of the cornea was in a case of serpiginous ulcer in January, 1882. Case—Mrs. S. C. H., *æt.* 50, constitution feeble. Having exposed herself in doing some outdoor work while the weather was rough, that developed an ulcer in the upper, outer quadrant of the right cornea. When I first examined the eye the ulcer was about 2x3 mm. in size. There was photophobia, congestion of the conjunctiva and subjacent tissues; eye-ball, right side of the face and head painful, constitutional remedies prescribed. Locally atropia and weak solution of bichlorate of soda. One week later the ulcer had doubled in size and depth. Atropia acted as an irritant, morphia disagreed, they were both discontinued. As chlorate of potassium had served me well in ulcers of other portions of the body, I determined to test it on the corneal ulcer, and so directed a five-grain solution to be instilled into the eye, as warm as could be borne, three or four times daily. From the time the chlorate was used the ulcer began to heal. Owing to loss of tissue there remained an opacity. Instead of the morphia the patient was given hydrate of chloral with bromide of potassium; though chloral when administered internally acts as an irritant to the eyes in some cases, in this case it did not.

During the past five years of special practice, nearly four years of which I have had charge of the eye and ear department of the dispensary of the Western Pennsylvania Medical College, some fifty-six cases of ulcer of the cornea have

come under my care. About two-thirds of these cases were of the phlyctenular variety. The chlorate has rendered good service in different forms of ulcers of the cornea, but rather better in the phlyctenular than in the other varieties. Not all of these cases were treated with the chlorate, as in some the washed mild chlorate was applied, in others the ointment of the yellow oxide of mercury, and in a few weak solutions of the bichloride of mercury.

In the limited experience I have had in the treatment of corneal ulcers and the use of the above remedial agents, my convictions are that the chlorate in about five-grain solution used quite warm three or four times daily is the most soothing and heals the ulcers more rapidly than any of the other agents tested. True, the warm water itself is of great advantage, but the chlorate is a valuable addition on account of its antiseptic action. It does not prevent bacterial evolution, but it does retard chemical decomposition of organic fluids.

Dr. Lippincott: I never use chlorate of potassium in such cases. We have so many old remedies which will answer the purpose. I have found in my experience that the direct application of very hot water to the cornea is a good thing in these ulcers. The one class to which the doctor refers, generally extremely obstinate, I have treated by the direct application of water at a boiling temperature or steaming. I put a drop of water directly on the exposed cornea so that it steams as it comes out. One drop of the water touches the ulcer, and the effect is marvelous in some cases. The first case I tried it in was a little boy, aged about six years, who had been under treatment for a good while. Treatment had been followed for about three weeks without any material change for the better, and it occurred to me one day to apply the hot water in that way. Before that time could get no dilatation, none whatever, but after the first effort with hot water, the pupil dilated very widely indeed. A good recovery was made. Heat is applied constantly of course, but this was a new application of heat. This hot water treatment, it seems to me, is milder than applying a red-hot iron to the ulcer. It seems to destroy less tissue than the hot iron, and it certainly answers the purpose in so far as my experience has gone.

Dr. Bane: I simply wanted to bring this matter out. Hot water is certainly beneficial, as Dr. Lippincott has stated, but it seemed to me that the chlorate shows an advantage, at least it has done so in my experience.

Gleanings.

TREATMENT OF OPTHALMIA NEONATORUM.—La Personne, in the *Journal de Medecine de Paris*, gives the following treatment for the prevention and cure of this condition. The vagina is to be washed out by an antiseptic solution before labor in order to free the birth canal from any products which may produce irritation of the eyes of the child. Immediately after birth, at the time at which the bath is given, a solution of carbolic acid in the strength of 1:100, or the following prescription of corrosive sublimate, should be employed:

R_y.—Corrosive sublimate, 1 grain.
 Tartaric acid, 2 grains.
 Distilled water, 8 ounces.

A few drops of this solution should be dropped into the eye.

In other cases the following may be employed:

R_y.—Nitrate of silver, 1 grain.
 Distilled water, 3 drachms.

PRESCRIPTIONS FOR SORE-THROAT.—According to the *Journal de Medecine de Paris*, Capart recommends the following prescriptions in this condition. For a simple catarrhal sore-throat he advises a gargle such as the following to be used every hour:

R_y.—Borax, 15 grains.
 Salicylate of soda, 30 grains.
 Decoction of althea, 7 ounces.
 Honey of roses, 1 ounce.

If after using this for twelve or twenty-four hours the affection continues, an astringent gargle is of value, made up as follows:

R_y.—Alum, 1 drachm.
 Alcohol
 Powdered glycerin } of each, . 3 drachms.
 Distilled water, 10 ounces.

In cases in which there is sore throat with herpetic spots upon the pharynx it is ordered that the patient shall go to bed and shall keep pieces of ice in the mouth, while poultices are applied externally, and lemonade, strongly acid, should

be administered. In these cases the following prescription should also be used :

R_y.—Chlorate of potash, 45 grains.
 Distilled water, 1 ounce.
 Simple syrup, 2 drachms.

A teaspoonful to a tablespoonful may be given every hour, and if the patient is an adult the quantity of the chlorate of potassium may be increased. Where there is much swelling of the throat with tonsillitis of the phlegmonous form accompanied by great pain, five or six leeches should be applied back of the angle of the jaw and ice kept in the mouth. The following powders should also be administered internally :

R_y.—Salol }
 Sugar of milk } of each, . . . 30 grains.

Divide into three powders and take one every hour.

Or a gargle may be employed as follows :

R_y.—Salicylic acid, 15 grains.
 Acetate of sodium, 7 grains.
 Distilled water, 10 ounces.
 Syrup of roses, 1 ounce.

In cases in which there is a tendency to a return of the sore throat, a gargle composed as follows is useful as a prophylactic :

R_y.—Crystallized carbolic acid, . . . 1 drachm.
 Alcohol, 5 drachms.
 Essence of peppermint, . . . 15 drops.

Ten drops of this mixture should be placed in a half glass of water morning and night and used as a gargle.

Or the following may be employed :

R_y.—Salol, 1 drachm.
 Alcohol, 5 drachms.
 Essence of peppermint, . . . 5 drops.

A teaspoonful in a tumblerful of water three or four times a day as a gargle.

TREATMENT OF CHRONIC ALCOHOLISM.—Ergolski reports ten cases of chronic alcoholism successfully treated by means of hypodermic injections of the nitrate of strychnine in the dose of $\frac{1}{20}$ of a grain. The amelioration in the patient's condition after these injections was constant. The dyspeptic symptoms disappeared and the patient did not desire alcohol. So complete was the action of the remedy that Ergolski regards it as almost a specific. A great ad-

vantage to be gained by the subcutaneous administration of the drug is that no irritation of the gastro-intestinal canal is produced at a time when it is apt to be affected by catarrh.—*Journal de Medecine de Paris.*

A MOUTH-WASH FOR FŒTID BREATH.—

R_y.—Water, 2 pints.
 Alcohol, ½ drachm.
 Borax, 15 grains.
 Thymic acid, 7 grains.

Or,

R_y.—Decoction of chamomile, 10 ounces.
 Glycerin, 2½ ounces.
 Chlorine water, 6 drachms.

Or,

R_y.—Peppermint water, 1 pint.
 Aqua lauro-cerasi, 2 ounces.
 Borax, 6 drachms.
 Essence of peppermint, a sufficient quantity.

All these mixtures may be used as gargles where the decomposition of particles of food in the crypts of the tonsils or the buccal cavities produces fœtid breath.

Microscopy.

A Consideration of Some of the Parts of a Microscope Stand, of Interest to Pharmacists.

BY DR. H. M. WHELPLEY, F.R.M.S.

Read before the St. Louis Club of Microscopists.

There is a constant increase in the number of pharmacists who study the use of the microscope as it is applied to the drug business. This, of course, has the effect of causing a greater demand for instruments which are employed in drug-stores. I have sometimes thought that an enterprising manufacturer of optical goods would place on the market a microscope especially designed for the use of pharmacists, or, at least, one that could be advertised as being especially a "druggists' microscope." It is not probable that, as yet, the demand from pharmacists has become sufficiently great

to attract the special attention of manufacturing opticians. I do not consider this, as might be expected, a source of regret; for, in reality, the pharmacist does not require a special instrument, rigged with novel devices and decked with new accessories. The needs of the druggists are met by microscopes which are already in the market. In selecting an instrument, the first thing for consideration is the stand. With a good stand for work, the druggist is ready to add and make use of such quality of optical parts as his requirements may suggest and his means justify; but with a poor stand, the possessor is always at a disadvantage, even with the best of optical parts.

The *stand* may be defined as a compound microscope without optical parts. Since the optical parts are the only essential portion of a microscope, and we can do no work whatever without them, this may seem like defining a gun as the portion of that firearm without lock, stock or barrel; but such is not the case. The stand is devised solely for the purpose of using the optical parts to the best advantage. Therefore, any one can readily see that the more perfect the stand the greater the amount of work to be accomplished with the complete instrument, and the more perfect and satisfactory it will be.

The *base*, or lower portion of the stand, first attracts our attention. Instruments can be found with bases of almost all conceivable forms, but the only one suitable for druggists is the tripod.

The *feet* forming the tripod may be disguised in the form of the base; but that does not matter, so long as there are three, and only three, points of support. This not only gives the greatest stability to the instrument, with the least tendency to vibrate when the table is jarred, but also has other advantages. One of these feet should always point toward the observer. This is of importance to the pharmacist, who has frequent occasion to incline the instrument while measuring or drawing objects by means of the camera lucida. The only exception to this is when the tripod has two long feet. In such a case it is justifiable to have the short foot directed from the observer.

The *pillar*, or *support*, requires no special attention. With some instruments it is single, while others have a double support, so that the mirror bar swings between them. Pharmacists are not especially interested in either of them.

The *joint* at the upper end of the pillar is a feature of more importance, and every pharmacist should see that his instrument can be inclined to any desired angle. If it is required that the instrument be used upright, it can be so employed just as well as the stiff-backed ones that we still see in the market. However, it is seldom that a druggist has occasion to use an instrument in that awkward position. This joint is usually a single hinge, but it may be secured by means of trunnions, and in such cases is usually provided with some means of tightening or loosening the bearings. Some instruments can be locked with the body at any desirable angle. This, however, is not necessary for a pharmacist's use.

The *arm* is the portion above the joint, and bears the body. In some instruments it is prominent and closely resembles in form the flexed human arm. If it supports the body firmly, that is all that is required.

The *body* is supported by the arm, and has attached directly to it the optical parts of the compound microscope. The body varies in size and length in different instruments. The size is not of very much importance, but in length it should be what is known as "standard," or be so arranged that it can be lengthened out. The body must be perfectly black inside, and this is best accomplished by means of black cloth. Cloth is more permanent than the blackened metal surface.

The *draw tube* is found only in the better class of instruments, and is a provision for adjusting the length of the body. With very high power objectives it is very essential to have a draw tube. It should be marked to indicate when the body is "standard" length. A great convenience is a "society screw" in the lower end of the draw tube. Pharmacists have frequent occasion to use quite low powers, and if the low power objective is placed in the draw tube there will be plenty of working distance, which I have found is not the case with some instruments. Again, it enables the pharmacist to place the analyser of the polariscope in the draw tube where there is no working distance for it with low powers.

The *collar* is the ornamental ring, or projection, at the upper end of the draw tube, or of the body when there is no draw tube. It is unimportant to the pharmacist.

The *nose piece* is the portion at the lower end of the body. It is provided with a female screw, into which the objective is fastened. By all means purchase a microscope with what

is known as the "society screw," so that any ordinary objectives can be fitted to it. I have found that the English thread in the "society screw" is not quite the same as the American, and I was obliged to get an adapter for the use of English objectives on an American stand. This nose piece has nothing to do with the double, triple and quadruple nose pieces, which are accessories, and not a part of the stand.

The *stage* is of importance. The best for the use of pharmacists are made of glass, so that they are not affected by liquids or chemicals. It is an item to have a thin stage which admits of oblique illumination in the examination of crystals. The expensive mechanical stages are very convenient, but not essential for the use of a drug clerk.

The *sub-stage* must be so arranged that it will admit of the use of sub-stage condenser, polariscope, etc. It is hardly worth while for a pharmacist who expects to do much work to purchase a stand without a sub-stage.

The *diaphragm* is a contrivance for regulating the volume of light which is admitted to the object. When a sub-stage is present, the diaphragm is adjusted to it; otherwise it is attached to the stage in place of the sub-stage.

The *mirror bar* and its arrangement will be found beneath the stage. All modern microscope stands have the mirror bar so attached that the mirror can be raised above the stage for the illumination of opaque objects. This is a great convenience for the pharmacist who has many substances to examine by reflected light. It is best to have a mirror bar which can be lengthened or shortened as may be required.

The *mirror*, if single, must be a concave one. Where there are two, one is plain and the other is concave. As far as the plain mirror is concerned, the size does not make much difference, but the larger the concave mirror the better. Pharmacists can use any mirror adapted to ordinary work.

The *clips* are for holding the slide in position. The ones which can be removed are preferable for a pharmacist who occasionally has liquids to examine, when the clips are in the way unless removed.

The *coarse adjustment* is found on all instruments. The rack and pinion arrangement is the best, and is the one used on the better class of instruments.

The *fine adjustment*, or *micrometer screw*, is also a feature of the better instruments, and should be present on every one owned by a pharmacist who intends to do much work.

It is much more convenient to have the fine adjustment near the coarse one. By all means avoid the instruments with the fine adjustment on the body near the nose piece. They are inconvenient, and the use of them has a tendency to vibrate the body of the instrument.

As stated above, the ocular, or eye piece, and the objective do not belong to the stand, so I will not consider them here. The lamp and attachment, as well as the turn-table, are accessories which require special description, not in place at this time.

A Practical Method for Staining Tubercle Bacilli

Since the examination of sputum derived from tubercular patients will no doubt become a universal necessity, says the *American Druggist*, a new field is offered to the progressive pharmacist for aiding the physician in his labors. Of course, many of the latter will attend to these examinations, themselves, or have them made by younger members of their own profession, whose time hangs more heavily on their hands. Yet there are many busy practitioners who have no such assistance. If they can find a pharmacist who is sufficiently expert with the microscope to make such examination, they will surely employ his services. That this is the case in some parts of Europe, notably Germany, is a fact generally known. Assuming for the present that a practical process for staining and mounting tubercle bacilli will be acceptable to those of our readers who are already in possession of and familiar with a microscope, we will quote here a method of proceeding recently published by Dr. M. Friendlaender, of Berlin. This method permits two mountings to be made in from five to ten minutes, provided the operator is skilled and has everything in readiness. The materials required are:

1. Ziehl's Solution.—This is a five per cent. aqueous solution of carbolic acid mixed with alcoholic solution of fuchsin (almost saturated).
2. A mixture of one hundred grammes of alcohol, of eighty per cent., and of five grammes of pure nitric acid.
3. A concentrated solution of methylene blue in water.

The mounting is done as follows:

A very small quantity of the sputum—about the size of the head of a pin—is taken up with the needle and spread

by means of the latter upon an object-glass to a thin layer about covering the space of a ten-cent piece. The slide is then allowed to dry in the air, and meanwhile a second slide is commenced. The dry mounting is now drawn three times slowly through the flame of a Bunsen burner or alcohol lamp. Next, two to three drops of the fuchsin solution are placed upon the mounting, and the slide held over the flame (mounting upward) until light vapors arise. The slide is now drawn once through water contained in a capsule, and the mounting then treated with a few drops of the acidulated alcohol, which is allowed to remain until the spot is completely decolorized (this will require about one-half minute). The slide is now again washed with water and then treated with a few drops of the methylene-blue solution, which is allowed to remain until the second side (to which the operator now turns) has progressed to the same point. The first slide is now washed with water, and finally dried with blotting paper (this is not advisable unless paper giving off no fibers is at hand) and over the flame.

Upon the mounting there is now placed a drop of oil of cedar (no cover glass), and the object examined with the lens (oil immersion objective).

Usually two specimens or slides suffice for determining the character of a sputum.

Book Notices.

SURGICAL BACTERIOLOGY. By N. Senn, M.D., Ph.D., Professor of Surgery in Rush Medical College, and in the Chicago Polyclinic; Attending Surgeon to the Milwaukee Hospital; Consulting Surgeon to the Milwaukee County Hospital and to the Milwaukee County Insane Asylum; Member of the British Medical Association, etc. Second Edition, Thoroughly Revised. 8vo. Pp. 271. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, \$2.00.

The exhaustion of the first edition of this work was remarkably rapid. Only six months elapsed from the time the first edition was published until now a second edition is issued. Such a phenomenon, if we may so term it, probably never occurred before in the publication of a medical book. It expresses in a most emphatic manner the great appreciation of the work by the medical profession.

As is acknowledged, within a few years bacteriology has revolutionized surgical pathology. All wound complications and most of the acute and chronic inflammatory lesions which come under the treatment of the surgeon are caused by micro-organisms; hence the necessity of a proper recognition of the importance of bacteriology as an integral part of the science and practice of modern surgery.

In the preparation of the second edition the author has aimed to add new facts illustrative of the relations of pathogenic micro-organisms to the various surgical lesions, and eight new illustrations have been inserted in the text descriptive of microbes not illustrated in the first edition. The book has also been divided into chapters, which it is hoped will prove useful for a better classification of the material and for more ready reference.

MEDICAL SYMBOLISM IN CONNECTION WITH HISTORICAL STUDIES IN THE ARTS OF HEALING AND HYGIENE. Illustrated. By Thomas L. Sozinsky, M.D., Ph.D., Author of "The Culture of Beauty," "The Care and Culture of Children," etc. 12mo. Pp. 171. Cloth. Philadelphia: F. A. Davis, 1231 Filbert street. Price, \$1.00.

The author, in the dedication of this little work, makes the following observation: "The age is too much one of trial, of incoherency, to be either eminently scientific or highly successful in practice. Beyond question, the medicine of the past is harmfully neglected; for its literature few have a desirable taste, and fewer yet a sufficient knowledge. Deploing this state of things, the author would gladly assist in bringing about a change."

Although the work treats mainly of old things, as the author states, yet it contains much which a fairly well-read physician will find fresh. Medical mythology is treated of very fully; and, on this, as indeed on all points, the results of the most recent archæological and other investigations are given. All that is said is deserving of the consideration of educated physicians. "The wise man will seek out the wisdom of all the ancients," says the author of Ecclesiasticus, who had the tastes of a cultivated medical man.

The work is spoken of by Drs. Weir Mitchell and Henry H. Smith (who are better judges than they?) as a highly entertaining and valuable one. On glancing through the

volume we find described The Serpentine God of Medicine at Rome, The Esculapian Serpent, The Epidaurian Oracle, Asclepia and Asclepiades, The Grecian God of Medicine, The Image of Esculapius, The Esculapian Staff and Serpent, Gods Analogous to Esculapius; Dibbara, a God of Pestilence; Hygeia, the Goddess of Health; Medical Talismans, Medical Amulets, Pharmacists' Symbols, Medical Symbolism in Practice, The Pentacle, etc.

We can not do the work justice in a brief notice of it. It should be procured and read; and we are of the opinion that every one will be desirous of reading it who wishes to be intelligent in regard to the ancient superstitions in medicine. There are many illustrations throughout the volume.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS WITH ESPECIAL REFERENCE TO THE APPLICATION OF REMEDIAL MEASURES TO DISEASES AND THEIR EMPLOYMENT UPON A RATIONAL BASIS. By Hobart Amory Hare, M.D., R.Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to St. Agnes's Hospital and to the Medical Dispensary of the Children's Hospital, etc. Second Edition, Enlarged and Thoroughly Revised. 8vo. Pp. 658. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, \$3.75.

Such a very short time ago was it when we noticed the first edition of this work, that we were greatly surprised to find a few days ago a copy of the second edition lying upon our table. We learn that the first edition was exhausted within six months of its publication, and that, during this time, it was adopted as a text-book in a number of medical schools. What more can be said in praise of any book, but especially of a medical work, than the account of such a record? It shows that not only students and physicians found that it fulfilled a want in the acquisition of a knowledge of materia medica and therapeutics—practical therapeutics—better than most of the books devoted to the same subject, but that also professors and instructors regard it as especially adapted as a class-book to supplement their college instruction.

In the second edition a number of new drugs are discussed which experience warrants introducing into a text-book and work of reference; and the latest information regarding the

more familiar medicaments have been added. The method of employing the rest-cure, and the use of suspension in the treatment of locomotor ataxia and allied affections, are given, and a large number of new prescriptions have been inserted to illustrate still further the best means of applying remedies for the cure of disease.

The author has prepared this work keeping in view that rational therapeutics is a complex art in which knowledge and its proper application, based on common-sense principles, go hand-in-hand. Scientific research, he says, has so largely opened up to every one the possibility of using drugs with a distinct idea of the reason for their employment—in other words, laboratory and bedside experience have made such advance—that the prescribing of particular remedies to meet certain indications observable in disease has become a science—it is no longer empirical. Prof. Hare, therefore, proposes to so teach practical therapeutics that a practitioner can give a reason for his prescription other than that he has been told that it was beneficial under such circumstances.

COLLECTED CONTRIBUTIONS ON DIGESTION AND DIET. By Sir William Roberts, M.D., F.R.S., formerly Physician to the Manchester Royal Infirmary, and Professor of Medicine in the Victoria University. 12mo. Pp. 261. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, \$1.50.

We take pleasure in recommending this work for study to members of the medical profession. Very many physicians have obtained all the knowledge they possess in regard to digestion and nutrition from works upon physiology and incidental allusions to those processes in works upon practice and other volumes. While they are accurately and scientifically treated in physiological treatises, for they are physiological processes, yet the practicing physician needs more extensive information in regard to them than can be obtained from such sources. His information should extend beyond a knowledge of the laws of endosmosis and exosmosis, the elementary constituents of the gastric juice, the chemical properties of that fluid and of the bile, the functions of the pancreas, etc. These subjects are of the highest importance; but there are others of great weight which do not belong to chemistry, nor are governed by philosophical principles,

which have been evolved by investigations or have resulted from long continued observations and experience. A knowledge of these can not generally be obtained from physiological works, but must be sought for from monographs, articles in journals detailing the results of investigations, etc.

The volume on our table consists of the author's Lumléan Lectures, "On the Digestive Ferments and Artificially Digested Food;" a course of five lectures "On Dietetics and Dyspepsia;" a paper "On the Therapeutics of Starch Digestion;" a paper "On the Estimation of the Amylolytic and Proteolytic Activity of Pancreatic Extracts;" an address "On Feeding the Sick;" some observations "On the Use of Gastric Antacids," etc.

The matters treated have been thrown together into four groups; and the materials have been subjected to some rearrangement, so as to give a degree of order or coherence.

It will be seen from the detail of the subjects treated that digestion, nutrition and diet are very fully discussed and explained; while the high standing of the author is an assurance that the task has been done in a manner to make the work one of great value to those studying it.

THE POCKET MATERIA MEDICA AND THERAPEUTICS. A Resume of the Action and Doses of All Official and Non-Official Drugs Now in Common Use. By C. Henri Leonard, A.M., M.D., Professor of Medical and Surgical Diseases of Women and Clinical Gynecology, Detroit College of Medicine, etc. 12mo. Pp. 300. Cloth. Detroit: The Illustrated Medical Journal Company. Cincinnati: Alfred Warren Company. Price, \$1.00.

This book, designed for the practitioner as much as for the student, has been compiled from the latest and best sources of information upon the several topics touched upon. Chief among the works consulted have been the United States Dispensatory, Gray's Manual of Botany, Remington's Pharmacy, British Extra-Pharmacopeia, Bartholow's Materia Medica and Therapeutics, Wood's Therapeutics, Witthaus's Chemistry, Fowne's Chemistry, Parke and Davis' Pharmacology and Organic Materia Medica, etc. For pronunciations—Thomas, Dunglison, and the Greek and Latin dictionaries.

This volume, so the preface informs us, has been in preparation for the past four years. The drugs of as late intro-

duction as 1891 are to be found in its pages. The scheme embraces the pronunciation, officinal or non-official indication (shown by an *), Genitive case-ending, common name, dose and metric dose. Then the synonyms, English, French and German. *If a plant*, the part used, habitat, natural order, and description of plant and flowers, with its alkaloids if any. *If a mineral*, its chemical symbol, atomic weight, looks, taste, and how found, and its peculiarities. Then the action and uses of the drug, its antagonists, incompatibles, synergists and antidotes. Then follow its officinal and non-official preparations, with their medium and maximum doses, based, so far as possible, upon the last United States Dispensatory. Altogether, it is a handy volume for either the physician, student or druggist, and will be frequently appealed to if in one's possession. It is the most complete small book on this subject now issued.

PRACTICAL POINTS IN THE MANAGEMENT OF SOME OF THE DISEASES OF CHILDREN. By I. N. Love, M.D., President Pediatric Section of American Medical Association (1890); President Mississippi Valley Medical Association (1887); Editor Medical Mirror, St. Louis. 12mo. Pp. 141. Paper. Detroit: Geo. S. Davis. Price, 25 cents.

This is an interesting little work, and will well repay perusal. The author has had a large experience in treating diseases of children and he has embodied it in this volume. But it contains not only his own bedside observation, both in private practice, hospital and dispensary work, but also facts gleaned from the works of other men.

The author has noted the difference in the character of the diseases which are observed among the poorer classes of a city, and among the well-to-do. In the former, as he states, the chief troubles are dependent upon bad air, bad food, and insufficient clothing. Among the latter the variations from the standard of health are largely due to improperly selected food, overfeeding, and congestive troubles dependent upon taking cold, being caused in the majority of cases by overheated homes, insufficient clothing, and careless exposure to the elements. The exanthematous diseases, however, affect all classes, but they are more serious and more fatal among the unfortunate poor.

Editorial.

TEST FOR GLUCOSE.—To test for sugar in the urine in the manner described in the works upon chemistry is tedious and difficult. It requires the possession of some chemical apparatus and not a little skill in manipulating. In fact, the conditions are of a kind that a busy practitioner would not undertake himself to make an examination of a specimen of the urine of one of his patients, if he thought it important to learn whether or not it contained sugar, but would send it to a chemist, or to some one who made a specialty of urinary analysis.

But examining urine for the presence of sugar has been so simplified by Dr. Willis G. Gregory, of Gregory's "Genesee" Pharmacy, 530 Main street, Buffalo, N. Y., that there need be no longer any necessity of sending a specimen to a chemist or a specialist in order to learn the presence of glucose. By a method devised by him a twelve-year-old boy can develop the fact as certainly as the most expert chemist; and that, too, with but little labor and in a very short time.

Dr. Gregory puts up the articles that he manufactures for testing for glucose in a pasteboard box about seven inches high, three inches broad in one direction, and two inches in another. This box contains two six-ounce bottles, each containing a solution; two test tubes; and a handle for grasping a test-tube while holding it over the blaze of a spirit-lamp. The solutions are marked Nos. 1 and 2. To ascertain whether a specimen of urine contains sugar or not—pour about two drachms of each of the two fluids into one of the test-tubes; then heat to the boiling point over a spirit-lamp; add a few drops of the suspected urine, when, if there be sugar present, either at once, or on further boiling, there will be change of color in the mixture in the test-tube to an orange or reddish hue with turbidity. The test will be found as sensitive as that of starch with iodine—the slightest amount of sugar (grape sugar) in the specimen of urine will produce the characteristic reaction.

We have tried Dr. Gregory's test again and again and have never been disappointed in it. We have such confidence in it that, if we were the medical director of a life insurance company, we would require every medical exam-

iner, who was not a chemist with chemical appliances, to keep it on hand, for we feel sure that not unfrequently it is certified that an applicant has no sugar in his urine when no examination has been made, for the reason that the examiner was not able to test for it after the usual manner. In like manner it is often certified that the microscope exhibited no casts, blood or pus corpuscles in the urine, when it is well known that the examiner has no microscope, and would not know how to use it if he had one. Our friend, Dr. Hyndman, told us some time ago an amusing incident of a physician who examined for a life insurance company. To a question on the printed application inquiring what the microscope had shown to be present in the urine, he wrote, after having examined a candidate for life insurance, "urea, uric acid, urate of soda," etc. As he knew nothing about microscopy, and had probably never looked through one half a dozen times in his life, he had some misgivings about the correctness of his microscopical display of learning, and, consequently, consulted Dr. H. in regard to it. To his astonishment the doctor informed him that while urea was always present in the urine, it was never deposited in a sediment, and was never seen in such by the microscope.

The cost of Dr. Gregory's Test for Glucose we can not now call to mind, but we know that it is small—the charge not being more than a dollar or a dollar and a half for enough to last for one or two years or more. Every physician should have a package. The expert chemist will find that the use of it will save him time and labor.

ROBERTS BARTHOLOW — DA COSTA. — Dr. Roberts Bartholow, the very eminent physician and medical writer, formerly professor in the Medical College of Ohio, has been unanimously elected Emeritus Professor of Materia Medica and Therapeutics in the Jefferson Medical College, of Philadelphia, by the trustees of the College; Dr. J. M. Da Costa, also a well-known and distinguished member of the medical profession, has been elected, by a unanimous vote, Emeritus Professor of Clinical Medicine in the same institution. A graceful and well merited tribute has been paid to the greatness of these two eminent teachers.

Says the *Philadelphia Medical Register*: Thousands will unite with us in hoping that, though withdrawn from their more active professional duties, both may long continue to carry on their labors, each in the respective department of

which he is a recognized representative, and to increase the number of their unexcelled contributions to medical literature and progress. Professor Da Costa will continue as heretofore to deliver his clinical lectures at the Jefferson College Hospital.

VIRCHOW'S SEVENTIETH BIRTHDAY.—Several of the pupils and admirers of Rudolph Virchow have united in appealing to the medical profession of the United States and Canada for contributions to the fund which is being raised in Germany, England, and, it may be said, throughout the world, as a testimonial to be given to Professor Virchow on his seventieth birthday. The German committee proposes that the fund shall be used in procuring a large gold portrait medal to be presented to Professor Virchow. Bronze replicas are to be given to each member of his family and to certain scientific institutions. The balance of the fund is to be transferred to Professor Virchow, to be devoted to such purposes as he may see fit. We take pleasure in calling attention to the circular now issued by the American committee:

VIRCHOW TESTIMONIAL FUND.

The medical profession of the world has the opportunity of showing its gratitude to Rudolph Virchow on his seventieth birthday, October 13, 1891. It may well be said that there is no branch of medical knowledge which has not been made more fruitful through his labors. We appeal, then, with confidence to the physicians of our country, to send forth a tribute which shall represent worthily America's obligations. Contributions will be received by any one of the undersigned physicians:

D. HAYES AGNEW, Philadelphia.	ALFRED L. LOOMIS, New York.
GUSTAV BAUMGARTEN, St. Louis.	WILLIAM T. LUSK, New York.
WILLIAM T. BELFIELD, Chicago.	HENRY M. LYMAN, Chicago.
JOHN S. BILLINGS, Washington.	WILLIAM OSLER, Baltimore.
H. C. CHAPMAN, Philadelphia.	WM. PEPPER, Philadelphia.
FRANCIS DELAFIELD, New York.	GEORGE ROSS, Montreal.
WM. H. DRAPER, New York.	NICHOLAS SENN, Milwaukee.
REGINALD H. FITZ, Boston.	FRED. C. SHATTUCK, Boston.
JAMES E. GRAHAM, Toronto.	J. COLLINS WARREN, Boston.
ABRAHAM JACOBI, New York.	WM. H. WELCH, Baltimore.
JAMES T. WHITTAKER, Cincinnati.	

HIGHER MEDICAL EDUCATION is undoubtedly making great progress in this country. We feel sure that it will be but a few years until the standard of medical education will be as high as any one could reasonably desire. We learn from

our exchanges that, on May 21st, Dr. Wm. Pepper offered \$50,000 towards an endowment fund of \$250,000, and \$1,000 annually towards a guarantee fund of \$20,000 annually, for five years, conditioned upon the establishment by the University of Pennsylvania of an obligatory graded four-year course of medical study.

The Medical Faculty pledged themselves to carry out this proposal, and to enter upon the four-year course in September, 1893, and subscribed \$10,000 annually for five years to the endowment fund. The approaching completion of the fine Laboratory of Hygiene, built by Henry C. Lea, Esq., will render the medical facilities of this school unequaled. This will be opened in February, 1892, under the distinguished teachers, Dr. John S. Billings and Dr. A. C. Abbott, who leaves John Hopkins University, of Baltimore, to take the position of assistant director. Dr. Billings, as all know, is the distinguished surgeon of the United States Army, and has been connected for many years at Washington with the Surgeon General's office.

THE PRELIMINARY KNOWLEDGE OF MEDICAL STUDENTS.—In the issue of the *Lancet*, of London, May 30th, a correspondent deplores the present low standard of preliminary education required by the Medical Council of England from those proposing to study medicine. He says that the military authorities have gone so far as to call its notice to the marked want of orthographical knowledge displayed by some qualified men. He also asserts that the preliminary knowledge required from medical students is far smaller in England than in any other country in Europe; and says that he thinks it is simply disgraceful that, in such a matter, England should be behind Spain and Portugal.

In his comments he says: "I suppose it is hopeless to expect that the Council should enact that all students must be graduates in arts or science of some respectable university. If it were to do so, it would raise the status of the profession—educationally at least, and probably also socially, too—to the level above that occupied by the Church and the Bar, and would do much to arrest the present unseemly practices so generally deplored by all right-minded members of the profession which are so difficult to deal with by legislation directed against them."

There seems to be, not only in this country, but also in Europe, serious dissatisfaction with the general literary and

scientific qualifications of medical men ; and as a result there exists an urgent demand that the preliminary knowledge of medical students be much greater than it has been heretofore. Physicians constructed from ignorant, uncultivated men can not hold respectable positions in the community. If all who are engaged in the practice of medicine had graduated at some college or university before beginning the study of medicine, how much higher to-day would be the standing of the medical profession ! It would, indeed, be far more worthily considered one of the learned professions.

THE SANITARY STATE OF EGYPT.—The *Lancet*, of London, gives the following account of the excessive mortality that prevails in Egypt in consequence of the filthy condition in which its inhabitants live. Unless an improvement in their sanitary surroundings should occur, we should think there would be danger of the country becoming depopulated of its native population. We really hope that Sir Evelyn Baring will soon do something in the way of saving the people from themselves :

“ The recent publication of Sir Evelyn Baring’s able reports has again called attention to Egypt. Its rapid and progressive improvement since our occupation is, as it deserves to be, a source of unqualified satisfaction to ourselves, as it may be a possible source of jealousy to some other nations. There is, however, one direction in which English rule has accomplished almost nothing, and that is in the sanitary improvement of Egypt. We learn from the *Times* correspondent that the weekly mortality has gradually risen to 70 in Cairo, 52 in Alexandria, and 102 in Port Said per 1,000 annually. As it was in the days of the Pharaohs, so it is in our days. With one of the driest, healthiest, and most beautiful of climates, man has contrived to make Egypt one of the most insanitary places in the world. The rates of mortality in its cities exceed those of some of the worst cities in Europe. Nature adopts a very simple method of dealing with the population of a country where all sanitary laws and precautions are neglected. High rates of sickness and mortality are simply danger signals to attract attention, and if these are unheeded, a big epidemic comes later on, to be succeeded by others in due course until the lesson is read aright. We may be quite sure that Sir Evelyn Baring is alive to these

facts. A scheme for the drainage of Cairo was submitted to the Government of Egypt long ago, but no decision has been arrived at, and nothing has been done. When the next reports upon the administration and material progress of Egypt appear, let us hope Sir Evelyn Baring may have to chronicle something as to the improvements that have taken place in the sanitation and public health of that country since his occupation of it as our representative."

A MOST REMARKABLE FIND—FOREIGN BODIES SWALLOWED BY A STOWAWAY.—In the issue of the *Lancet*, of London, of May 30th, an editorial details the most remarkable "*find*" of foreign bodies discovered in the cadaver of an Arab we ever heard of. We quote as follows:

"On Thursday, May 21st, the body of an Arab, found dead on one of the ships in the Albert Docks, was taken to the Seamen's Hospital, name unknown. A necropsy was ordered by the coroner, and made by Dr. F. Croucher, house surgeon to the branch hospital. There were no signs of disease in the brain or the chest, except a few old adhesions in the left pleural cavity. The gall-bladder was very distended and full. Three small ulcers existed on the anterior coat of the stomach. Several patches of inflammation were found in the small intestine. In the cæcum were found twenty trousers buttons, three cog-wheels (apparently out of a watch, two of them 1 in. in diameter—these were doubled), one 2 in. steel screw bent double and one 1 in. screw, six pieces of a lock (the biggest piece was 1½ in. long and ½ in. broad), a circular piece of brass (1¾ in. in diameter folded into four), several pieces of iron wire (four were 1½ in. in length), brass and lead, and two key tallies on a ring, one inch in length. In the ascending colon, about five inches from the cæcum, were found a piece of steel wire one-eighth of an inch in diameter, and three inches and a half in length, bent double, and one small cog-wheel. The weight of these bodies together amounted almost exactly to half a pound. The body was much emaciated; no subcutaneous fat was present in chest or abdominal walls, or any fat round the kidneys. The deceased was quite unknown; no particulars could be discovered by the police employed to obtain evidence for the purpose of the inquest. There was no perforation of intestines, or any sign of disease in the colon."

EMBRYOTOMY.—We learn from an editorial in the *N. W. Lancet*, that a discussion recently occurred in the New York Academy of Medicine in which Dr. Grandin expressed the hope that surgeons in hospitals at least would, in the future, cease doing embryotomy and substitute for it some form of the Cesarean section, thus paving the way for the abandonment in private practice of operations that sacrifice the life of the infant. Dr. Grandin takes the position that the Cesarean section should not be left as a last resort, but should be made an elective operation just as much as an ovariectomy or hysterectomy. He claims that done in that way the mortality of the section would sink to a comparatively insignificant figure, as low or even lower than that of craniotomy.

In a recent number of the *British Medical Journal*, Dr. Murdock Cameron, Obstetric Physician to the Glasgow Maternity Hospital, takes a ground similar to that of Dr. Grandin, and gives a table of ten Cesarean sections performed by himself, out of which but one child and one mother were lost, the child evidently having died before the operation. Dr. Cameron says that he thinks the time has come when the lives of both mother and child may be saved, and that the physician has no right to sacrifice the child.

CORPORATIONS SHOULD BE COMPELLED TO OBEY THE MANDATES OF THE MEDICAL PROFESSION.—The following quotation, taken from an article in the *Brooklyn Medical Journal*, is sufficiently explanatory in itself without there being any need to enter into an explanation:

“Dr. Griffin, Health Commissioner, said that during the last few months la grippe in an epidemic form had existed in this city. The mortality had been largely increased on account of it. The commissioner read some comparative figures of the ratio of deaths during the weeks of April in 1890 and 1891 to show how extremely fatal the epidemic had been this year. Medical men were not decided as to the cause of the disease, but there could be no question that certain precautions were possible. With this in view he had appealed to the presidents of the different street railroad companies to refrain from running open cars before May 15th, except between the hours of nine and six, when the temperature should be above seventy degrees. Presidents Lewis, Richardson and Beers answered the commissioner's letter promptly, and agreed to do as he requested. President

Partridge, of the DeKalb avenue lines, alone refused to accede to the request, and declined to recognize in any way his authority to dictate as to the administration of his road. This brought the matter to an issue. A medical practitioner of reputation made a complaint against the continued running of open cars after the issuing of the commissioner's order, and the matter was taken into court, where it is now pending adjudication. Dr. Griffin said that his course in issuing his order regarding the open cars was based on a belief that the public safety called for immediate action. The commissioner then introduced Dr. Wallace, who addressed the committee briefly, saying that he had no doubt that the running of open cars increased the amount of sickness and the number of deaths in the city. Dr. Williams followed Dr. Wallace in the same vein, but advocated a temperature limitation in preference to the proposed time limit for running open cars. Dr. Bodkin agreed with Dr. Griffin, and thought that the public health demanded the passage of the ordinance. Dr. Moore also spoke in favor of the ordinance, and said that the testimony of patients as to the harmful effects of the open cars at this time of the year, which they were forced to ride in because no others were available, was plentiful."

SYMPTOMS OF INFLUENZA.—J. Mitchell Bruce, M.A., M.D., F.R.C.P., Physician to Charing-Cross Hospital, on last month, May 19th, delivered a lecture to the students of the Charing-Cross Hospital on "Influenza and its Complications." We have thought our readers would be interested if we made some extracts from the lecture in regard to the symptoms of influenza:

"Though not of itself particularly dangerous, influenza is attended with very serious complications and followed by sequelæ of a peculiarly low type, and it is of the utmost importance that you should make yourselves familiar with a disease which is at once so widely spread and may lead to so many unhappy results.

"The disease is epidemic in its distribution. The invasion is generally quite definite. It may be sudden and swift, coming on in the street or without previous warning otherwise. A few days ago I saw a lady with influenza whose husband received a telegram of her being urgently ill only a few hours after he had left her in her usual health. The patient's first complaint is of a sense of chilliness or "cold water down the back," with a feeling of illness and nausea, perhaps sick-

ness. Very shortly pains make their appearance, and they rapidly increase in severity. The pains of influenza are mainly of two kinds as far as the patient's complaints go: first, headache; and second, pains about the limbs and trunk. The headache is characteristic from its severity, seat and persistence. It is, indeed, no ordinary headache, and I can not help thinking that it is even more severe in the present epidemic than it was last year. So violent and so persistent is it, that patients will tell you that they have not been able to sleep for two whole days and nights, in spite of all the different remedies which had been used to relieve it. It is in one or both of the frontal regions, and the eyeballs also ache (one or both), sometimes intensely. The pains in the limbs are also characterized by their severity, by their breakbone character, and in some cases by that distressing inability to keep the aching limbs at rest in bed, which we all know by experience after a day's over-exertion.

"Prominent also amongst the symptoms of influenza in many of our present cases are disturbances of the respiratory system. Cough is very common, of a very remarkable kind, being sudden, paroxysmal, violent, irrepressible, and harsh, attended with soreness in the chest, and ending in expectoration, with exhaustion. The sputa vary in quantity with the degree of involvement of the respiratory tissues. They may be absent or they may be profuse, yellow or grey, and mucopurulent when the catarrh of nose or lower passages is severe. Here let me warn you not to commit the mistake of expecting to meet with coryza in every case of influenza. Many persons will not acknowledge influenza because the nose has never run. They say there is always a cold in the head in influenza. This is an excellent instance of the growth of a popular error. When a nasal catarrh is severe it is accompanied by fever and pains in the head and limbs, and is then said to be a "feverish" or an "influenzal cold." "Influenzal cold" is easily corrupted into "influenza"; influenza itself has probably been never seen; and thus coryza has come to be put down as the essential feature or element of the epidemic disease, instead of the fever, the prostration, and the pains. I have dwelt on this point, insignificant though it may appear, in order to caution you against committing an error in diagnosis. Coryza, however, occasionally does make its appearance, especially in cases where rest and warmth have been neglected. If a man despise his attack of influenza,

and walk about for two or three days, he is not only extremely likely to get a certain amount of "cold in the head," but he may be thankful if he does not have bronchitis or pneumonia set up as a consequence of his rashness. These are the most important features of an ordinary attack of influenza."

THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF TEXAS.—This institution, located in Galveston, will open the coming fall with nine professors, and will give three years' graded course of instruction of eight months each. We learn from the *Virginia Medical Monthly* that the pay of each professor will be, on an average, \$3,000 each session. The President of the Board of Regents is Dr. Thomas D. Wootton, of Austin. The College and Hospital will occupy adjacent blocks in Galveston, immediately upon the Gulf and Bay. "It is the determination of the Regents to make this a truly leading school of medicine in every respect, and to allow none to graduate from it who are not deemed worthy of diplomas."

THE ALFRED WARREN COMPANY.—Mr. Alfred Warren, the oldest bookseller of Cincinnati, has removed his bookstore from Sixth street between Central avenue and John street to Central avenue between Sixth and Longworth streets. The business having been enlarged, a company has been formed for conducting it with the title of "The Alfred Warren Company," Mr. Alfred Warren being the president. Besides carrying a large and valuable stock of books in every department of literature, the company will keep on hand a full line of medical works of the latest editions. Physicians at a distance may feel assured that their orders for books, stationery, or any article belonging to the book trade, will be promptly filled and forwarded to them. The lowest prices will always be charged. Mr. Warren will continue to give his whole time to the business. He is always glad to have his friends of the medical profession to call upon him.

DR. R. ROBBINS, of Hartford, Kan., says: "In the past four or five years of my practice, I have found Peacock's Bromides a most excellent preparation. Used it with most gratifying results in cases of spasms, nervousness, etc. It is an excellent remedy for headache. I can not get along without it."

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Original Contributions.

Two Cases of Laparotomy with Complications.

BY H. C. CROWELL, M.D., KANSAS CITY.

Read before the Medical Association of the State of Missouri.

PRESIDENT AND GENTLEMEN OF THE ASSOCIATION: During the past few months, of practice in Kansas City, I have met with two cases of "Laparotomy," for the removal of the uterine appendages, in both of which I have noted conditions which, to a greater or less extent, influence results, in like cases, hence I have elected to call them complications.

I have deemed them of sufficient importance to, in a brief way, present them to this body, that, should they prove of infrequent occurrence, in the practice of others, we may all share in what is to be learned, from reviewing them together.

CASE I.—Mrs. D., American—aged twenty-five—has lived a fast life—comes from a high altitude in Colorado. Has a swelling in the left fornix of the vagina, extremely sensitive to touch, feels as a fluctuating or semi-fluctuating tumor—uterus firmly bound down in the hollow of the sacrum. Denies ever having had syphilis. Has suffered very much for many months. Has been treated a great deal for the existing trouble, but without benefit.

Some five months before I saw the patient a physician had dilated the cervix, since which time she had been much worse, probably from the strain on old adhesions.

She gave a history of repeated attacks of pelvic inflammation. Her urine was examined, at my request, by her physician, who reported the sp. g. 1021, no albumen, some phosphates. It is to be regretted that no microscopical examination was made, as possibly it might have served to avert the final result.

Operation was decided upon and performed on November 23. Patient took a large quantity of ether, at one time, requiring hypodermics to bring up the pulse, which had become quite weak. The patient was under the influence of ether about two hours. The omentum was firmly adherent to the peritoneum, necessitating separation, before the fundus uteri could be reached.

The large gut was found crossing from the left over nearly to the right iliac fossa, then turning back, on itself, passed over and was firmly adherent to the fundus uteri, thus, in a very marked degree, rendering it difficult to follow out from the cornu of the uterus, on the Fallopian tube, as is usually possible. I therefore lifted the gut off from the uterus and then made more than a reasonable effort to remove the object of the operation, but, after vain and protracted endeavors, I closed up the abdomen to await results.

Patient rallied unusually well from the ether, conversed freely for some hours. The urine was drawn and contained considerable blood. After eighteen or twenty hours, patient began having slight muscular contractions about the face and limbs—urine grew more scanty and contained less blood. In about thirty hours from the time of the operation, the patient died in uræmic coma, due, probably, to the primary shock of the operation, coupled with the ill effects so often noted after prolonged etherization. It was too late to attribute death to shock. Indeed, she manifested no symptoms of shock. It was not late enough for septicæmia or peritonitis, and we had no hemorrhage.

Post-mortem examination revealed the wound to be dry and the peritoneum to be united. I tried to free up the uterus from its posterior adhesions, before making vaginal separations, but was unsuccessful till I had cut away the vagina, and then, grasping the cervix, I turned the organ back and by force severed its lateral attachments, thus, in a measure, destroying the identity of the tubes, as you will observe by the specimens passing around. I then removed the ovaries—the left could only be removed by taking a piece of the gut, which now accompanies the specimen. It is to be noted that there was a salpingitis of the left tube.

I then removed the kidney, which was slightly, if at all, enlarged. The capsule was free, save in some isolated spots. The inside of the kidney contained considerable blood and bore evidence of acute congestion. The specimen was submitted to several competent medical gentlemen, who unhesitatingly pronounced it a fatty or albuminoid kidney.

It is a fact, well recognized by men of experience, that it is the exception, rather than the rule, that a diagnosis of amyloid kidney is made before death.

We know that they occur in cases of long continued suppuration, especially of osseous tissues, phthisis, pyelitis, syphilis and ague, but chemical and microscopical examination may fail to reveal either albumen or casts, our only reliance then being upon specific gravity, which should be low, and an abundance of urine voided, and these two conditions are subject to such wide variations that one might overlook them.

The condition of this patient was not such as to lead us to suspect this kind of kidney, as she denied syphilis, had never had any suppurating disease, and, coming from a high altitude, malaria could be excluded.

The nervous mechanism and physiological metamorphosis were so interfered with, by the primary shock of the operation and a prolonged etherization, that an increased work was thrown upon the kidneys, which, after a short time, due to their already crippled condition, succumbed to the task, thus allowing the system to become surcharged with effete material, which normally should be excreted, and, as a result, we had uræmia and death.

We must in this case note :

1. Failure to obtain evidence sufficient to preclude the use of ether, as in the chemical examination the Dr. found no albumen and the sp. g. was such as to excite no suspicions, and yet the termination of the case teaches us that one superficial examination of the urine is not sufficient, when preceding abdominal operations. The repeated and microscopical examinations should be made; and last, but not least, a patient's statements, when there is any reason whatever for doubt, are to be taken with much distrust.

An anomalous condition, or at least to me was such, was the fact of the large gut crossing over to the right side and returning upon and adhering to the fundus uteri. Treve's explanation, to be found in the new edition of Gray, would not so consider it.

We have then in this case, as complications, if you please to call them such, insurmountable adhesions which could not be estimated before the incision was made, as neither can positive diagnosis; hence we must say, all abdominal sections are, in a great measure, exploratory.

2. We note an obscure renal trouble not unfrequently difficult of recognition.

3. Unusual course of the gut, which by its adhesions seriously complicated matters.

4. The effects of ether and operative shock in lighting up acute kidney trouble when, perchance, a chronic disease exists.

CASE II.—The next case comes to me with a history which briefly runs thus: Mrs. B., American, aged thirty, brunette, began menstruating at fourteen, married twice, first at eighteen—two and a half months after marrying became pregnant, and shortly she had a greenish discharge, probably a gonorrhea, as she was afterward told by a physician. No physician was consulted for the trouble for three months, as the husband strenuously objected.

During the examination, which was finally made, a sound was introduced into the uterus, which resulted in miscarriage, after which she states she was confined to the bed for six weeks, with some kind of a pelvic inflammation.

Since that time has suffered more or less, with pain in the back and groins, with much bloating of the abdomen and constant leucorrhea, increased at times, especially before the menstrual period. Has been very irregular in her periods, usually twice a month, since she began using the sewing-machine, by the use of which she obtained a livelihood. She lived with her first husband one year and three months. Three years later, she married again, and although she lived with her second husband three years, she never became pregnant, though no preventive measures were observed.

Flowed profusely on intercourse with the husband and at menstrual period, attended with severe pain. Not being able to perform her part of the marriage contract, and the husband not being disposed to kindly accept the situation, they separated some four years since.

From that time on has flowed a great deal, especially last summer, and has been getting gradually worse. Has no knowledge of ever having had any discharge of purulent material through the bladder or uterus.

Her sufferings becoming so intense, she was advised to go to a hospital for an operation, which she did.

The aspirating needle was employed to assist in diagnosis on December 11, 1888, but with negative results, as no fluid was obtained. On December 15th an exploratory operation (as such it proved to be) was performed by two surgeons, of unquestioned ability and skill, who after examining the condition resolved that the adhesions were too

extensive to warrant further interference, consequently the wound was closed and the object of the operation abandoned, as in my first case reported.

Recovery from the abdominal incision was uninterrupted, and on January 7th the patient was again etherized and the abscess tapped per vaginam, with the aspirating needle, this time bringing pus.

A bistoury, following the needle as a guide, was introduced, laying open the sac. Following this operation patient had some trouble with the bladder, such as pain and tenesmus on micturition, and for the first twenty-four hours passed blood in the urine. She left the hospital on January 14th, much relieved of the distress in the right side, but soon after the opening in the sac closed and the pains returned.

On February 3d I was called to re-open the sac, found the uterus crowded well down and forward with large swelling at the right and posterior to the uterus.

Patient etherized, I employed the dorsal position, as the one most favorable for entering the sac at its greatest convexity, which I did, with a pair of wire scissors, holding up the anterior vaginal wall and separating the vulva with a Sims speculum. When pus appeared beside my scissors, I opened the blades, thus dilating my tract. I then stitched in a rubber drainage tube, which remained doing its work for six days, when it came away.

February 10th I introduced a Wylie's uterine dilator, for the purpose of opening the canal, preparatory to re-introducing the tube.

Immediately I opened the blades, almost pure urine gushed away, which was a surprise to me, as I had not before, at any time, seen or suspected urine.

I knew the dilators could not penetrate the bladder save by a previously made opening. I then left the matter without further attempt at introducing the drainage tube. From the patient, I learned she had passed blood, at times, previous to my operating to evacuate the sac, that she had noticed a whitish sediment in the urine. How the hole came in the bladder is only a matter of conjecture. The contents of sac were, evidently, being largely discharged through the bladder.

Things now seemed to present a very gloomy aspect for the patient—an attempt had been made to relieve her con-

dition, by an operation, and to no purpose, and now we are confronted by an additional trouble.

All that could reasonably be expected from palliative treatment had been exhausted. Our patient was in a desperate condition, physically and mentally.

Even though we explained all the dangers and difficulties attending an operation, still she persisted that she preferred to die on the table to living as she then was, with probably a lingering death. After considerable solicitation on her part, as well as that of some of her friends, I consented to undertake the operation, not, however, without serious misgiving.

We were all agreed that an operation was indicated and was the only thing from which she could expect relief.

I have of necessity been obliged to trespass upon your patience in bringing out the history and circumstances in this case, as they more clearly define the complications to which I now would call attention.

First, and of marked significance to me, in undertaking this operation, was the fact that men, of recognized ability and experience, had deemed the case of such a grave character or surrounded by conditions which rendered it unsafe to invade the pelvis to such an extent as should be necessary for the removal of the tumor in question, that they retired after simple exploration, and that, too, before we had a hole in the sac, made in its evacuation per vaginam, through which the contents of the sac must escape into the peritoneal cavity, when upon its removal we must exercise more or less pressure, thus exposing us to a purulent peritonitis and all its well-dreaded sequences. We are also aware of an existing rupture in the bladder, which does not fail to excite within us apprehension from various reasons, as possibly we should not easily encounter it or may meet with some trouble in closing it, from its inaccessibility.

The former operation also complicated the matter, at least to the extent of driving us from the median line, the most favorable point of entrance to the abdominal cavity. We were obliged to enter the cavity through the rectus muscle, thus exposing us to more hemorrhage, beside affording, as does muscular tissue, a better nidus for any germs which might escape from this sac. Again, too, had we gone through the cicatricial tissue of the old incision, we should have exposed ourselves to non-union of our wound, as

cicatricial tissue is of very low vitality; also we should have found adhesions of peritoneum to cut intestines.

Although we have noted complications enough for one case, still we could anticipate or entertain another, the condition of our patient.

Here we had a woman, who had had a suppurating disease for months, and possibly years, hence her system of necessity was in an impoverished condition, and more than that, she had repeatedly taken ether, always in a measure deleterious, and but lately subjected to the shock of both ether and an abdominal operation.

March 13th the patient went to the "K. C. Nursing and Surgical Home," had a bath and purge and was put to bed. On the 13th, at 3:45 P. M., etherization was begun, Dr. Lanphear taking charge of its administration. Dr. Von Sweringen and Dr. Fryer assisted in the operation.

I avoided the old cicatrix and underlying adhesions by going to the right and through the rectus muscle.

The adhesions under the old incision were dense and unyielding, but gave me no trouble, as I was well to the right of them. The hemorrhage was more from the muscular tissue than is usual in the median line, but was readily controlled by pressure forceps and one ligature of catgut.

The peritoneum was not easily recognized from its thickness and changed color, but we soon settled that question and passed down upon the fundus uteri. I then passed out from the right cornu of the uterus upon the Fallopian tube, which seemed to be tolerably free from adhesions, the ovary or sac was firmly bound down, posterior and to the right of the uterus, though without serious trouble, I dissected it out, not occupying to exceed three to five minutes. The left ovary was easily found, but seemed to be quite as firmly adherent as the right.

The specimens submitted have been in alcohol since the operation, consequently present a shrunken appearance, more especially the right, as its substance contracts more readily than the left, which is simply a cirrhotic ovary.

The right seems to be a sac, the walls of which are the remains of what was once the ovary. The tube does not bear the evidences which we usually expect in cases due to gonorrheal infection, viz.: a salpingitis or the result of inflammatory processes in the shape of thickening.

Ovaritis, according to Mr. Tait, is due: 1. To injury. 2. Gonorrheal infection. 3. Septic poisoning in the parturient

condition. 4. Ex-anthematic fevers and rheumatism. In this case I am unable to arrive at any cause save that of septic infection.

She had evidently had an ovaritis for a long time, since she had suffered pain on intercourse and yet no symptoms of an abscess developed to late last fall.

The only exciting causes at the time were work on the sewing-machine and taking of cold.

From Mr. Tait's writings I learn that ex-anthematic oöphoritis consists in an interstitial inflammation and atrophy, with an incurable amenorrhea and superinvolution of the uterus.

In peritoneal inflammation of the ovary, or periovaritis, we have an excessive menstruation. In our case, on the left side we have the cirrhotic ovary of the first or ex-anthematic form and also we have the condition of excessive menorrhagia which favors a conclusion of periovaritis from some cause, producing a pelvic inflammation, which has resulted in an abscess of the ovary of the right side. Mr. Tait says that abscesses of the ovary are extremely rare and not easy of diagnosis before death—and that in the majority of cases death occurs from rupture into the peritoneal cavity and is called inflammation of the bowels.

A case is reported in the *British Medical Journal*, by Mr. J. W. Taylor, which is of some interest to me in connection with this case. It was a specimen of double pyosalpinx and abscess of ovary, the result of gonorrhea.

There were exceptionally good reasons for believing that only one exposure to contagion had taken place, seven years before. Large abscesses were found on both sides. The patient had made a satisfactory recovery. Mr. Taylor spoke of the special danger involved in the use of the sound as a carrier of contagion in any case of gonorrheal vaginitis.

The same we may say of this case. But one attack of gonorrhea was known to have taken place and that some twelve years since. Also at that time a sound was introduced into the uterus, resulting in a miscarriage, which was followed by an inflammatory process. The opening through the abdomen was unusually long (four and a half inches) to give me room to work, as I fully anticipated trouble, and prepared for it. I ran my incision well down to the pubis, thus enabling me to use two fingers of each hand, on either side of the sac, while dissecting it out. I was thus better

able to judge of the force used, and the amount of adhesions to be overcome.

On removing the sac, as was anticipated, the contents escaped in considerable quantity into the peritoneal cavity through the openings made per vaginam for its evacuation.

This serious complication, as it is always regarded, could not be averted, hence we accepted the situation as we found it, and douched out the peritoneal cavity repeatedly with hot water, sopping up the water and blood from Douglass cul-de-sac, till the sponges came up clean and dry.

The bladder claimed our attention to the extent of searching for several minutes for the hole, with a gum-elastic bougie, but to no avail, hence we resolved to close the abdomen, leaving the hole in the bladder to close of itself, fearing all the while that our desires might not be fully realized, as we had a wound, whose lips had been bathed with overflowing pus for a considerable period. Time seemed to be too precious for us to pause to wash out the bladder and inject fluid, for the purpose of detecting the opening, hence we closed the abdomen, exercising great care in every step to prevent any infection.

This being done, the patient was placed in bed, a soft catheter introduced and tied into the bladder, to drain away the pus and urine. The catheter was left in the bladder for two days, draining away much pus and urine. At the end of two days or a little less, the catheter was removed, as it seemed to irritate still more, an already irritable bladder. After its removal the patient passed her urine in small quantities, and at short intervals at first.

Briefly, the record kept at the home shows temperature, for the first twenty-four hours, to have been a little over 99° F. Pulse 98—respiration 24—urine drawn by catheter—sleep five and a half hours, some pain in the right side, bladder washed out. Hypodermic of morphia and atropia—hot water by mouth. Ice cap.

Second twenty-four hours, temperature was about 100 on an average. Pulse 104—respiration 24—sleep eight hours—iced soda water. Colored discharge from the vagina, coming probably from the hole made in evacuating sac per vaginam. In the evening had an enema of beef tea and brandy: retained it well, as did the five consecutive enemas given at intervals of three hours. Was restless and had ten grs. antipyrine, catheter was removed at 1:40 P.M., having been retained in the bladder twenty hours, save when it was

removed for cleansing. Passed some urine in the bed at first after its removal. Afterward 2 to 6 drs. every hour. Had 2 to 4 drs. of beef tea by mouth hourly.

Third day, temperature 100—pulse 116—respiration 30—sleep ten hours, urine passed almost hourly 2 drs. to 5 oz., in the twenty-four hours saved 17 oz. 6 drs., at 2:30 had a seidlitz. At 4 P.M. an enema containing turpentine, which brought away much flatus. At 7:30 P.M. another seidlitz. At 10 P.M. an enema and thorough operation of the bowels, felt easier after it. At 11 P.M. had a hypodermic of morphine and atropia.

Fourth day, temperature ran higher, but never passed 101.3°—pulse 122—respiration 28—urine 28 oz. Perspiring and feels very weak.

Discovered suppuration in the abdominal wound, which was opened at once by the removal of two stitches and the wound thoroughly washed with a very strong bichloride solution.

Fifth day, temperature and pulse ranged a trifle higher, with more sweating, leading us to fear septic infection, which to a limited degree did exist. Urine was held longer and passed in larger quantities.

Took a goodly amount of nourishment. Put her on quinine and iron, carb. amm. and digitalis and whisky, in frequent doses, after which the temperature fell and ranged about 99.3°. Pulse and skin improved.

Since the fifth day there was a constant improvement. Urine held in normal quantities. Sat up on the thirteenth day, and walked on the street on the twenty-second day after the operation. No drainage tube was employed. The hole in the vagina served as a mode of drainage.

I have perhaps already encroached upon your indulgence, in entering so much into the details of these cases, and I would only ask a moment more, that we may recapitulate some of the points of interest.

I think these two cases prove, first, that we are unable to tell with precision the extent of adhesions or character of the trouble, oftentimes, until an exploratory incision is made, and even then, as we have seen, later investigation may alter our opinions.

Lawson Tait says: "Absolute accuracy of diagnosis in the abdomen is very far from being possible; only the ignorant assert that it is, and only the fools wait for it."

The first case shows the great care to be exercised in obtaining a perfect knowledge of the condition of the kidneys before administering ether, especially when associated with abdominal operations, and yet in that case we see how ordinary tests failed to reveal what afterward was proven by the microscope. In the second case, the urinary examination was made especially difficult, from the presence of pus being discharged from a suppurating body through the bladder.

In resolving upon the feasibility of an operation in cases like our second, we must consider all the complications as a whole. When we shall have done this, we may consider some of the individual complications, as, for example, the opening in the sac made for *vaginam* to evacuate its contents.

We know the contents of this sac to be purulent if not virulent. To remove this sac without exposing more or less of its contents would be impossible, thus exposing us to septic peritonitis, a result which leads *me* to the conclusion that *no* pelvic abscess should be opened where its contents *may* escape, when radical cure is sought by its removal per incision abdominalis.

After the hole in the sac, we must consider that which we assume to exist in the bladder. The contents of the sac being discharged with the urine, the sac thus being partially emptied, while only a very small amount could be detected as coming from the opening per *vaginam*, taken with the fact that pure urine was obtained where the dilators were used for opening the vagina, leads us to believe our supposition to be well founded, though at the time of operation, with the aid of a gum elastic bougie, we were unable to detect the opening. To have washed out the bladder and employed fluids for the detection of an opening would have involved time which we felt unjustifiable, as the patient had then been some time under ether, and while not suffering, we remembered that she had taken ether repeatedly, which does not, like some drugs, act with less deleterious results, but, on the contrary, injures the blood and physical resistance.

We evidently had little or no escape of urine from the bladder after the operation, which we explain upon the theory that probably the opening was of an oblique direction and small, hence, when no pressure was exercised it kindly closed, as not unfrequently occurs, according to Coulson.

Leaving the hole in the bladder to close of itself, I find to be a recognized practice. Rivington so advises. Heath also quotes from Rankin's abstract a case where a rupture two inches long had been allowed to close itself.

We should say that where good drainage can be obtained by a catheter retained in the bladder, so that urine shall not escape by the opening, thus preventing union, it may be very safe practice to leave bladder rents to care for themselves.

The pathological condition which we have in this ovary of the right side may be of interest to some. I have slides of sections of the sac walls and of the tube, and should be interested to hear opinions upon the probable origin, course and nature of this tumor, as such it might be called.

Selections.

Tracheotomy versus Intubation.

Tracheotomy and intubation are the two recognized surgical procedures for the relief of tracheal and laryngeal obstruction. One or the other of these operations may be required to relieve the dyspnoea dependent upon membranous laryngitis or diphtheritic laryngitis, growths in the larynx or trachea, growths exterior to these organs causing pressure upon them, œdema of the mucous membrane of the larynx or trachea from inflammation, from the inhalation of irritating gases, from the swallowing of corrosive liquids or from burns or scalds, etc.

For many years, tracheotomy had been the only method employed for surgical interference in these cases. In 1880, Dr. Joseph O'Dwyer, of New York, began a series of experiments which, later on, resulted in the perfection of the operation now known as intubation. It is certainly an ingenious plan, and the contrivances for its performance reflect more than ordinary credit on the inventor and investigator.

Regarding the utility of intubation in general practice, it is the object of this paper to discuss, as well as to show, the relative value of the operation as compared with that of tracheotomy.

The advocates of intubation claim that on account of the simplicity of the operation and the avoidance of the use of the

knife, it is the procedure that commends itself most highly to the profession, and is the operation that will be allowed most readily by the laity.

True, the operation of intubation is a knifeless procedure, and so far as the general public are concerned, is the one they would select, if the choice were theirs. But, on the other hand, is intubation a simple surgical operation? If it is, then it certainly, in this respect, possesses a decided advantage over tracheotomy. Unfortunately such is not the case, for not only is the operation, as well as the removal and replacement of the tube, very difficult procedures, but the requisite manipulations require a degree of manual dexterity which the average physician is not apt to acquire, who is called upon to practice the operation only on rare occasions.

Furthermore, the re-introduction of the tube, which is a frequent necessity in cases of intubation, is a source of constant annoyance to the patient, occasioning all the fright of the primary operation, together with nervous and physical exhaustion of the child, induced by its alarmed condition and attending struggles. The exhaustion hereby produced is, in diphtheria, above all things, to be avoided.

Among other complications, accompanying or following the operation, may be named : 1. Loosened false membrane may become wedged in the lower end of the tube, and require its instant removal ; or worse still, the membrane may be forced downward by the entering tube into the trachea, and, before it can be coughed up or the passage cleared for the patient to breath, cyanosis may develop, respiration cease, and death ensue ; no time being afforded for the performance of tracheotomy. 2. Owing to the presence of tenacious or ropy mucus, or from the formation of loose membrane—which the child, in its weakened condition, is not able to expectorate—the tube may require removal at any time, and in the absence of the physician and the inability of other persons to remove it, symptoms of an alarming nature may occur. 3. The liability of liquids finding their way into the air passages, and pneumonia following as a result. This is a source of great danger, which is to be kept in sight, especially as an inordinate desire for fluids exists in these cases, the result, not of actual thirst, but of uncomfortable sensations caused by the presence of the tube. 4. In a certain few cases (estimated to be about one per cent.), ulceration from pressure of the tube and alterations in speech have

been met with ; the aphonia being partial or complete, but always amenable to treatment. 5. The danger of the tube becoming loosened during a paroxysm of coughing is by no means slight. In such a case, it may become lodged in the œsophagus, or else be gotten out through the mouth, if prompt assistance be rendered. In either instance, the child is in a serious condition, especially in the absence of a medical attendant. The larynx, after such an accident, is liable to behave in one of two ways: either the swollen tissues will occlude the entrance of air, or the relaxed vocal cords will fall together and give rise to immediate severe dyspnœa.

From the above observations we are forced to admit that intubation of the larynx is by no means a simple surgical procedure, nor is it an operation devoid of dangers. These facts being accepted, our next step is to show the relative value of intubation and tracheotomy, and to prove wherein one is superior to the other.

In the operation of tracheotomy, the physician is able to see his work, and to meet such complications as may arise in a cool and calm manner—for he is not working in the dark. Such is not the case when intubation is performed. There the surgeon is obliged to work unaided by sight, trusting entirely to his sense of touch.

In tracheotomy the pain is momentary and the subsequent treatment of the tube can safely be entrusted to the nurse or the child's attendant. Not only so, but the operation, once performed, is finished, and the patient is not harassed by subsequent surgery. Unfortunately intubation is not attended with these results. The presence of the tube may at any moment become a source of danger, and in the absence of the physician, even a cause of death. The operation itself is often as trying to the patient as that of tracheotomy, and the subsequent removal and re-introduction of the tube—which is of daily necessity, at least—repeats all of the suffering, be it mental or physical, of the primary procedure. Furthermore, the operation of intubation has frequently to be followed by that of tracheotomy.

Finally, in spite of the fact that tracheotomy is regarded as one of the most difficult of surgical procedures, it is our belief that any country practitioner, who possesses some acquaintance with anatomy, and has a cool head together with some surgical experience, can perform it.

Glancing for a moment at the statistics showing the relative mortality and recoveries of the operations,* we are confronted with the fact that they are largely in favor of intubation. But when we consider that intubation is frequently followed by tracheotomy, and that the latter is often performed when the patient is in a moribund condition, the apparent discrepancy in the results of the operations is explained.

In conclusion, we think we can draw the following deductions:

1. That in cases of equal gravity, tracheotomy is not, in itself, a cause of greater fatality than intubation.

2. That the operation of tracheotomy involves less suffering to the patient, because, once performed, it is done, and the patient is not annoyed by subsequent steps, as in intubation, which operation, in its repetition, involves all of the harassment of the primary procedure.

3. After a tracheotomy, the patient usually falls into a quiet slumber; such is not the case when intubation has been done; clearly showing that the presence of the tube, inserted between the vocal cords and into the larynx, is a cause of greater and more prolonged irritation than is the case in tracheotomy, where the tube is placed lower down into the trachea.

4. Intubation involves a great risk of foreign bodies, liquids, etc., entering the trachea and setting up a pneumonia.

5. In tracheotomy, the subsequent cleansing of the inner tube can safely be intrusted to the nurse. In intubation, the doctor alone can give the tube its needed attention.

6. The physician who is able to perform properly an operation of intubation, is just as competent to do a tracheotomy, and, in the latter case, with less liability of dangerous sequelæ following.—*Editor Med. and Surg. Journal.*

VOMITING OF PREGNANCY.—Pombrak has employed with success menthol with sugar of milk for the treatment of the vomiting of pregnancy. He has also used tincture of iodine for the same purpose. The case in which he employed menthol with advantage was that of a highly nervous young woman suffering with chlorosis.—*Journal de Medecine de Paris.*

Preventive Medicine.

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What Are Filth Diseases?

In a paper on this subject, published in the *Sanitarian*, for March, 1891, Dr. S. W. Abbott gives this summary: "We may reasonably conclude that a filth disease is one in relation to which filth in some form or other, either wet or dry, plays the part of an important factor only in its causation, but is not itself the direct cause; that it acts either as a favorable soil for the propagation of disease germs (other favorable conditions also existing), or that it acts as a suitable medium or vehicle for the transmission of the particulate contagion from the sick to the well, as is probably the case in the inhalation of the bacillus tuberculosis in and with the dust of filthy or ill-ventilated apartments." We may also conclude that the filth which promotes the spread of infectious diseases is *specific filth*, hence the necessity of removing all filth is that thereby we are sure to remove the specific filth, or that which contains the germs of infectious disease."

He emphasizes the idea that filth does not cause disease, but that it serves as a breeding-ground for specific germs of disease; that filth is a condition favorable to the production of disease, but that it does not cause it. The diseases which he classes as filth diseases are: Tuberculosis, scarlatina, puerperal fever, typhoid fever, cholera, yellow fever and diphtheria, although in this last disease the relation to filth is not so clearly established. It is well that sanitarians should define the true place of filth in connection with disease, as there is no little confusion in the public mind as to their true relations.

The Adulteration of Alcoholic Beverages.

The third biennial report of the Dairy Commissioner of Minnesota contains the following remarks, which are of importance to physicians: That there are extensive adulterations and sophistications of wines practiced in the United States, no one will question. It must not be assumed, however, that all wines upon the American market are necessarily of this character, since there is not a particle of

evidence to support such a claim. There are sections of this country that produce wines of excellent quality, and there is no evidence on record to show that these native wines are adulterated or sophisticated during their manufacture or before their sale. Chemical analysis of samples of California wines shows them to agree closely to the accepted standards, and give no evidence of being other than pure and of good quality.

In the examination of beers, it was found that the principal sophistication consisted in the use of cheaper substitute for malt, either in the form of other grain, unmalted barley mixed with the malt, rice flour or glucose. The principal effect of these is the production of a beer which is poorer in albuminoids and phosphates, and is, consequently, less nutritious than it should be.

As substitutes for hop bitters, the report mentions picrotoxin and picric acid, but regards their use as rare.

Of preservatives, salicylic acid seems to be the most popular, as nearly one-fourth of the samples examined contained it. No case of direct adulteration was discovered, all variations from the normal article being some fault of curing or clearing, and the above-mentioned substitutes in the manufacture.

The report deals harshly with foreign brandy. Most of the brandy imported to this country from France is of inferior quality, frequently by reason of absolute sophistication. The term "brandy" seems to be no longer applied to a spirit produced by fermentation of grapes, but to a complex mixture of alcohol derived from grain, potato or beet-root refuse. Potato and beet-root spirit is shipped into France from Germany and the United States. These are the most objectionable of all spirits, and hence brandy made from them is objectionable. They are flavored and colored, branded and labeled, and shipped to America in large quantity. Physicians frequently order brandy, while when they do so they can confidently expect that one of these mixtures will be supplied to the patient.

The report calls attention to the fact, further, that not one of the samples examined by the Dairy Commissioner of New Jersey, in 1888, came up to the pharmacopœial standard. Most of the native brandies are genuine, although they have not been aged enough to make them bland and palatable, and many of them contain fusel oil.

The most of the samples of whisky examined were deficient in alcoholic strength, and contained too much solid matter in the form of burnt sugar, glycerine, etc. Two out of fifteen samples examined were not whisky, but artificial mixtures. Those that were genuine were not properly mellowed by age, and were, therefore, harsh, irritating and consequently disturb the digestion of drinkers, and make them unfit for medicinal use.

Regreening of Peas and Beans with Salts of Copper.

According to the *British Medical Journal*, January 31, 1891, the Health Committee of Glasgow have notified the dealers in colored peas that they will institute proceedings for the sale of such articles, whenever the circumstances are sufficient to warrant a prosecution.

The medical officer of health, in a report to the Health Committee, says: "The process of regreening is essentially fraudulent in its intention and commercial results; that regreening with sulphate of copper certainly does not make vegetables more wholesome—probably always makes them less wholesome, and in some proportions undoubtedly does so; that the public ought, in purchasing preserved vegetables, to ask for ungreened, or at least for vegetables free from copper."

This report then gives the history of this industry in France, the seat of the practice, showing that since 1853 the practice has been prohibited in Paris, and since 1860 throughout France; that commission after commission have reaffirmed the decision, until in 1889, when the Consulting Committee of Hygiene adopted a report of M. Grimaux to the effect that "in the position of our information as to the noxious influence of salts of copper, there is no ground for prohibiting the practice of regreening with salts of copper."

There is a law in Germany against the coloring of food-stuffs, as also in Massachusetts; and as the French Government have finally yielded to the wishes of the manufacturers, the consumers must now look out for themselves.—*Brooklyn Med. Journal*.

OLD MEN complain of the burdens of old age, but Cicero says in his "De Senectute" that to those who have no resource in themselves for living well and happily every age is burdensome.

A Retrospect of the Successive Epidemics of Cholera in Europe and America from 1830 to 1890.

Dr. Willoughby, in a paper before the Epidem. Society, after alluding to the doctrine of epidemic influences, telluric and atmospheric conditions, and other unknown agencies as at once baseless and needless, and to the opposite delusion, prevalent in the south of Europe, of its being infectious in the same sense as small-pox, asserted that all the independent and scientific students of the subject in Europe and America were now agreed that the vehicle of contagion was contained in the evacuations; that it was thus carried by fomites, as soiled clothing, etc., while persons suffering from the disease, even in unrecognized and mild forms, infected the soil and water of places through which they passed. Insanitary conditions favored its development, but the most insanitary towns—as Rome, Seville, and others—had escaped, since they had been provided with pure water supplies. The incubation period he believed to be as a rule from one to two days, four being an ample limit for quarantine purposes. Its transportability and conveyance wholly and solely by human intercourse was proved not only by the progress of every epidemic having followed the great routes of trade and pilgrimages, but by the rapidity of this progress having corresponded to the facilities for travel, whether by caravans, river boats, railways, or ocean steamers, quoting in this connection Dr. de Renzy and others as to the altered circumstances of travel in Northern India; and he thus explained the immunity of Australia and Chili, virtually the most isolated communities in the civilized world. It was, he said, in 1821 that cholera, so far as was known, first advanced from India westward, reaching Astrakhan in 1823, but subsiding until 1827, when a fresh wave swept over Persia, entering Russia in 1829. In 1830–31 it was fomented by the war in Poland; in 1831–32 it spread over the whole of Europe; and in 1832–33 over North America, lingering in each continent for about two years longer. It was remarkable, and totally inconsistent with the theory of conveyance by winds, that, though some cases had occurred on board ships in the Medway as early as July, 1831, it did not reach London till February, 1832, having effected a landing at Sunderland, and traveled *via* Newcastle, Edinburgh, Glasgow, Belfast, Dublin and Cork, whence it was

at length brought to London. A wave rolled over Persia, Arabia and Syria between 1836 and 1839, but retired again. In 1840 it entered China, then passed westward through Central Asia, re-entering India from Afghanistan and through North Persia, reaching the Caspian and Black Seas in the summer of 1847. Following the military road then in course of construction from the Caucasus to Moscow and the river highway of the Volga, it was intensified and spread by the fair at Nijni Novgorod and the massing of the Russian, Austrian and insurgent Hungarian armies on the Danube, and in the course of 1848-49 had attacked every country in Europe except Denmark and Greece, which were saved by stringent quarantine. It extended to America in 1849, but died out in the course of the following year. The epidemic of 1854 was not strictly a separate invasion, but rather a resuscitation of the last, which had lingered in the south and east of Europe and the west of Asia until called into fresh activity by the Crimean war. Every country in Europe and America was again invaded. The incidents of the outbreaks in America threw great light on the conveyance of the disease by fomites. The epidemic of 1865-66, which was the first to come wholly by the Red Sea, spread rapidly over Europe and America; but had scarcely subsided when a fresh explosion occurred at the Hurdwar fair in India in 1867, whence it was carried to Persia and Russia, being re-intensified *en route* by the pilgrimage at Great Mesched in 1868 and the fairs at Nijni Novgorod in 1869 and 1870.

At the close of the Franco-German war, every country in Europe was attacked except Great Britain, and America succeeded in averting its importation until 1873. By 1874 it had, however, disappeared everywhere on this side of India. In 1881-83 it prevailed in Arabia and Egypt; in 1884 it made its appearance in France, and soon raged throughout Italy and Spain. The influence of pure water supplies was brought into special prominence, not only in the case of single towns in Italy and Spain, but in the almost complete immunity enjoyed by Germany, which had previously suffered heavily in every epidemic. Cholera lingered in the south until the end of 1885, since which date it had been absent from the Continent of Europe until the isolated outbreak in Spain in 1890. This, Dr. Willoughby was convinced, was not imported from the East, but was a recrudescence of the epidemic of 1884-85, brought about by excavations in infected ground. Still cholera had, since 1888, been

slowly but steadily advancing by the Persian Gulf and the extensions of that route. It had last year reached the shores of the Caspian and Black Seas, and had raged at Mecca, though Egypt had almost miraculously escaped, and it had persisted at Aleppo and the Syrian ports certainly as late as January of the present year. He had little doubt that, as its march had closely corresponded with that in 1845-47, we might expect history to repeat itself in an invasion of Southern and Eastern Europe during the coming summer, unless, as in 1823 and 1839, it should retire, after having thus approached the confines of Europe. If, however, it had not already really died out, the vast increase of communication between the two continents rendered such recession less probable than it was fifty years ago. The paper was illustrated by a number of maps showing the great routes and the course of each epidemic in Asia, Europe and America. Sir W. Moore gave his experience of an outbreak at Aden, following the unloading of a cargo which was proved to have been soiled with cholera excreta at Bombay, the crew remaining healthy; and Mr. Murphy alluded to Dr. Simpson's having traced the occurrence of cholera on board certain ships moored in the Hooghly to an infected milk supply. Surgeon Dawson argued in favor of epidemic influences, but Dr. Willoughby, in reply, urged that in the case of the ships at sea quoted by Mr. Lawson, the crews, who must have been most exposed to atmospheric influences, escaped, the steerage passengers only being attacked; while such negative evidence as that of the Southampton and Theydon Bois outbreaks in 1865 was worth nothing. It was more probable that some one suffering from mild and unrecognized cholera had crossed over from France, and, leaving the infection behind, had perhaps returned, than that Mr. Groombridge had inhaled it with the sea breezes on Weymouth pier. Such difficulties were incident to all cases even of small-pox, the source of which no one doubted. The President complimented Dr. Willoughby on having brought within the compass of a single paper a mass of information hitherto inaccessible, and on having by his demonstration of the almost "postal regularity" with which the late epidemic followed the routes of travel by road, rail and steamships, regardless of prevailing winds, but refusing to cross the Scandinavian and Carpathian mountain ranges in mid-winter, given the *coup de grace* to the doctrine of atmospheric waves, which, in the case of this disease, he had until that evening accepted.—*Lancet*.

The Present Status of the Koch Treatment of Tuberculosis.

The absence of exact science in the medical knowledge of the day has, perhaps, been nowhere so well exemplified as in the extreme readiness of both profession and laity to accept the unproved word of a single man in relation to a hitherto unanswered and weighty question in therapeutics—that of the existence of a specific control of the tubercular process. Nor is the precipitate haste on the part of the clinicians to condemn the method, as yet not even half tried, any more evidence of the development of stable principles in our methods of combating disease processes. From a theoretical standpoint, excluding from present consideration the general care and management of the patient, the destruction or modification of the *materies morbi* is to be accomplished in four probable ways; these include: the utilization of the antagonism of micro-organisms toward each other; the deleterious effect of micro-organismal products on the growth of micro-organisms; the unfavorable effects on micro-organisms of certain agents of mineral or organic origin; and the production of general surroundings unfavorable to the advance of the infection, both in the individual and in the community. To the second of these groups is to be referred the method recently proposed by Professor Koch for combating the tubercular process. This method, which is substantially, if not precisely, identical with the measures previously employed and announced by Dixon of this city, has for its underlying principle a fact, the verity of which may easily be recognized by analogy in numerous instances of the incompatibility of waste products with productive growths. Thus alcohol, as a product of vegetable activity manifested as fermentation, when present in proportions beyond twenty per cent. is sufficient to retard and eventually destroy the actions and vitality of the ferment. Nor is the use of the products of bacteria as a means of altering the further growth of bacteria in the animal tissues by any means a recent one, as may be noted in relation to the work done upon the bacillus pyocyaneus by Charrin and others. Separation of the fluid product of the growth of this last bacterium from the culture itself, by means of an unglazed porcelain filter, and inoculation with this sterile product has prevented the inception of pyocyanic

disease in animals after subsequent inoculations with virulent matter. Probably the same principle underlies the Pasteur method of hydrophobic prevention; and the field of preventive medicine glows with promise of great and near discoveries in this same line in other diseases.

The substance used by Koch in his experiments and more recently in the treatment of tuberculosis in man, and which, as already stated, is produced in practically the same manner by Dixon, is obtained from cultures of tubercle bacilli exposed to altered conditions of life by means of extraction with some such menstruum as glycerine. This material, from which no definite active agent has been eliminated by Koch, when brought into contact with tubercular growth in the animal economy, is announced to produce decided lowering of activity of growth and eventually, if in sufficient proportion, to permanently stop the morbid process. In the animal economy, further, as an evidence of its action, whether by direct action upon the germ, or by inducing deleterious changes in the tubercular tissues, there is manifested a febrile reaction; and as a result of its action it is stated that there is a destruction of the diseased structures, and subsequently their replacement by cicatricial tissue. The exact mode of operation is not known, various theories having been offered in explanation.

Such was the knowledge established by the researches of Dixon and Koch, and eagerly seized upon by the entire world in the expectation of mastering tuberculosis. In the natural course of the rapid popularization of so important a discovery, the limits of its application have been wittingly as well as ignorantly widely overstepped; badly diagnosed cases and cases whose only cure can be death have been subjected to the vicissitudes of the treatment. With an eye singly to the result of the means upon the tuberculosis, cases have been permitted to approach the fatal termination because of the neglect of the true end, the recovery of the patient; and too often even the increased nutritive need of the weakened system has been passed by in the endeavor to overcome the process at fault. Clearly, in the method of action of the substance, it was to be recognized that its only safe application could be found in the most localized forms, and preferably in foci where elimination of the products could be performed most thoroughly and with less severity to the organism; nevertheless, in the mad hurry, cases of advanced degrees of the disease and cases marked

by generalization of the malady have been permitted the treatment, only to swell the death list which has been heaping discredit upon the measure. Where tubercular foci are numerous and widely distributed, if each focus is to be the scene of rapid necrotic processes, each followed by a local focus of reactive inflammation, what is to be expected but the effects of an intense toxæmia and fever, which are the necessary attendants of such a condition?

Where the lungs are riddled with the tubercular changes of late chronic phthisis, what is to be expected if this new therapeutic agent accomplish the best possible results, and yet leave a great mass of cicatricial tissue to block up and hamper the pulmonary tissue? Moreover, what of that great mass of patients, from whom, the treatment having failed to produce notable external changes, the lymph was withdrawn and death followed—are the repositive evidences of no palpable changes in the internal tubercular localities in the line of change indicated? How is it possible from post-mortem appearances to affirm absolutely the generalization of the tubercular process in this or that position, within a definite and brief period? These are the considerations upon which more information and more definite knowledge should be demanded from those who condemn the method. Its action upon true cases of lupus has been too decisive to permit, in other localized forms of tuberculosis, any discredit until more exact information is had. The conflict of reports is too great at the present date and the tendency of medical opinion too observant of so-called policy to allow an absolute decision; this will and can only come when the lymph method has fallen entirely out of injudicious hands and is left to the investigation of the cautious and thoroughly interested.

There are other phases of the subject, too, which can not fail to attract attention in the future. How much of the severity of the reactions, and how much the failure in results may be due to the presence of substances other than the essential toxalbumen in the lymph? What auxiliary measures are those best adapted to the furtherance of the favorable results of treatment? Finally, if even in mild cases of pulmonary tuberculosis failure should be established, there is one other point of the utmost importance to be further examined. In the earliest paper of Dixon (*MEDICAL NEWS*, November, 1889,) antedating Koch's announcement by more than a year, there were distinct expressions

of the development of immunity in animal tissues against the tubercular process by this general method; and investigations carried on in rabbits and guinea pigs have, with considerable uniformity, confirmed this hypothesis. It is undoubtedly an injudicious act to inoculate healthy individuals with an agent of which so little is known as this mixture of the retrograde products of tubercle bacilli, but it has been, and doubtless will be, done more or less frequently for a time. There are no positive arguments in relation to tuberculosis refuting the usual rule of infections to protect against themselves; and there do occur occasional cases whose clinical histories present features not averse to this view. For example, within the knowledge of the writer, a young man of questionable family history, who for twenty year had had a destructive scrofuloderm only cured within the past few years, became accidentally inoculated with tuberculosis, while performing an autopsy upon a tubercular body. To ordinary observation, the usual course of inoculated tuberculosis was manifested, the healing of the original wound, the period of some days' quiescence, the formation of a nodule at the site of sore, and the breaking down of the surface into a slightly purulent fluid to the formation of a tubercular ulcer. Within more than a month no lymphatic involvement had become manifest, and the local node was removed by operation. Thus far, nearly five months, there is no evidence of general infection. Such cases have occurred before, and the process remained for a long time localized—yet may not the previous tubercular condition as manifested by the existence of scrofula, have exerted some limiting influence upon the inoculated process? The existence in otherwise normal lungs of isolated and calcified nodes of old tubercular processes may suggest the protective value of the results of the prior disease; and where these are associated with evidences of general advancement of the process there enters the question of whether there had not been at least a temporary protection analogous to that afforded by vaccination.

This, then, is the status of the proposition. The statements denying value to the treatment of tuberculosis by the method of Koch, whose claim to consideration rests upon what appear to be general laws, and is corroborated by laboratory researches, lose their own force from the numerous faults of omission and commission met in the

widespread and ignorant application of the method. Even should it fail as a curative, except in the localized and superficial variety known as lupus, there is yet another field for its usefulness open to investigation, its possible preventive power.—*Med. and Surg. Reporter*, May 9, 1891.

Erythroxylon Coca: Therapeutic, Hygienic.

BY P. DE PIETRA SANTA, M.D., PARIS, FRANCE.

When all the nations of the civilized world in a noble concert of enthusiasm and of gratitude are preparing to celebrate with the greatest *éclat* the four hundredth anniversary of the discovery of America by Christopher Columbus, it appears to us opportune to review the various acquisitions to therapeutics and hygiene for which old Europe is indebted to young America.

After Peruvian bark, the first in chronological order as well as in importance, is incontestably Peruvian coca, with its precious alkaloid, cocaine. If the introduction of coca into France at the beginning of this century did not create much stir, if for quite a long period it remained merely a scientific curiosity, and as the appanage of celebrated travelers who had learned its worth in its native country (Papig, Tschudy, Mantegazza, *et al.*), it must be admitted, nevertheless, that it has been constantly the subject of earnest study, of varied researches, of endless experiments in the laboratories of chemistry and of physiology, and of most searching clinical observations. This is truly the logical progress of good and useful discoveries, which advance by their intrinsic value, without depending on any fashionable craze or noisy puffery.

It was principally from 1862 to 1870 that this movement for scientific investigation received a stimulus which caused Professor O. Reveil in 1872 to say: "This substance is destined to take an important rank in therapeutics."

The inaugural theses read before the Faculté de Médecine of Paris by Demarle (1862), Moreno y Maiz (1868), and Ch. Gazeau (1870), and before the faculty of Strassburg by Lippmann (1868), gave to coca its standing in modern therapeutics by establishing in a positive way this fact—viz.: "That it produces an exaltation of life, an increase of muscular energy." To Ch. Fauvel belongs the merit of signaling a second fact no less remarkable: "The anæsthetic

action of coca on the mucous membrane of the pharynx, with its stimulating action on that of the larynx, have given it its characteristic name, 'The tensor *par excellence* of the vocal bands.' "

Before enumerating the various therapeutic resources that coca offers us, it will not be amiss if we sketch the state of the question as it presents itself in Peru and other republics of South America. These descriptive data have been furnished the Société Française d'Hygiène in an interesting communication by Dr. Manticuzo, Colombian Consul at Tucuman (Argentine Republic).

"Coca, indigenous to Bolivia, thrives in warm and moist regions free from frost, called 'jungas.' The aborigines of the country employ it usually by chewing the leaves to extract the juice. When the coca leaf is masticated, the juice, impregnated with saliva, acquires positive alimentary properties. It restores the flagging powers lost by physical or mental labor and becomes an efficacious stimulant in gastric and intestinal dyspepsia; it is in these conditions that coca is indicated to supply extra nerve force during long journeys by postilions, couriers and soldiers."

The Bolivian army is regularly supplied with coca leaves, which form an integral part of their campaign rations.

These data, founded on the experience of centuries, carry with them the usual accompaniment of the marvelous and the supernatural, causing this celebrated plant to be looked upon by the natives of South America as an animated representation of the divinity which, confirmed by modern researches, assigns to coca the precious and characteristic properties found concentrated in its essential alkaloid, cocaine, the physiological and therapeutic action of which has been so well elucidated through the works of Dr. Carl Koller in 1884, and Marc Laffont in 1888.

Let us go a step further into the domain of clinical observation. The stimulation of cerebro-spinal activity produced by coca, and that Mantegazza had foreseen, has been studied with great care by Feignaux and Libermann. The former asserts that it is marked in all cases "where a nervous trouble would seem to result from an atonic condition." The latter extols its use in the form of "vin Mariani" to combat morphinomania, nicotinism and alcoholism.

In the same train of thought Dechambre wrote: "Under the influence of coca, it seems that a new force is introduced into the organism as water is into a sponge."

The special applications of coca in the form of a diffusible "vin tonique," prompt in action, have been stated with precision by Dr. Mallez, "in those cases of depressed condition of the system and marked impoverishment of the blood resulting from the prolonged abuse of balsamics"; by Barth, Pidoux, Germain Sée, and many others "in chronic affection of the respiratory organs," where it always proves an element of tonicity and comfort.

In the successive and varied manifestations of tuberculosis it is vain to expect of coca antibacillary or germicidal properties; its action is far more certain, far more efficacious and much deeper, in that it favorably modifies the prognosis by placing the system in a state of effective defense and, so to speak, making it impregnable.

In this connection I may be pardoned for recalling what I wrote in 1875 in a volume entitled *Le traitement rationnel de la phthisie pulmonaire*: "I prescribe daily with success and benefit coca in its most convenient, most agreeable, and most active form—that of vin tonique Mariani." Mariani must be justly considered as the introducer and the apostle of the fortunate importation of coca to Europe.

The periodic progress that has been made in our day in prophylactic hygiene and preventive medicine could not ignore the essential properties of the Peruvian plant. Coca has fully lived up to the promises and expectations that we hoped to realize, and even those who, in a spirit of disparagement, more or less interested, had conjured up before the public the specter of cocaism, finally realized that they were only unconscious plagiarists. In cases of abuse similar accusation has been formerly brought against coffee and tea, and yet the hygienic and therapeutic value of these precious substances has remained resplendently intact through ages and among all civilized people.

As to the opposition of constitutional skeptics or chronic fanatics, this can not be of long duration in an epoch that Lubonski called, very justly, "*L'époque de l'anémie et du lymphatisme*," and which inspired our great writer Michelet with the alarm cry: "This frenzied life that we are leading to-day (*in aere Parisiens*), this life of terrible toil and excesses, it is upon the children that the consequences fall."

There lies the origin of the success of vin de coca in that, starting from a modest laboratory, it has spread like a beneficent train of blessing among all classes of the French population, to cross successively all the frontiers and carry

back beyond the Atlantic, with all the improvements of art and of science, the gift that America had formerly made to Europe.

This rapid historical sketch would show a regrettable gap if I did not summarily indicate the powerful support that certain circumstances of our social life have given to the general employment of the *vin de coca*.

Nobody, indeed, is ignorant of the deplorable effects of alcoholism. To remedy this terrible scourge of humanity, ingenious manufacturers had thought to substitute for alcoholic drinks perfumed cordials more agreeable to the taste, and hence much less within reach of the laboring classes. But, alas! the costly drinks are to-day objects of commerce that sanitary science condemns.

In a recent communication to the Academy of Medicine, Dr. Lancereaux did not hesitate to affirm (with clinical notes in hand) that chronic intoxication through essential drinks (absinthe, vermouth, amer picon, vulneraries, etc.) was spreading more and more, especially among ladies, their delicate taste naturally leading them to prefer cordials. "These drinks," he exclaimed, "cause the greatest ravages, for not only do they engender nervous complications which too often cause death, but they are besides the cause of denutrition or a weakening of the system which predisposes to tuberculosis, and causes death through pulmonary diseases. Consequently they should be considered as one of the greatest causes of depopulation."

As a conclusion to his address, Dr. Lancereaux asked the Academy of Medicine to warn the public of these dangers they were generally ignorant of, and the authorities whose mission it was to guard the public health.

I have truly but limited confidence in the intervention of the public authorities by the limitation of the sale of spirits and by high license, added to the high tax already levied on spirits; but I walk hand in hand with this eminent clinician when he proposes to enlighten public opinion by popular instruction, by hygienic tracts, and by illustrated lectures.

Advancing a step further in the domain of practical remedies, I would propose to give to alcoholic drinks and to essential liquors, as an efficacious and infallible succedaneum, the *vin de coca* Mariani, the moderator *par excellence* of the nerves, the tonic of muscular fiber, the strengthener of the weakened system,—in a word, the unquestioned alleviator of physical suffering.

Corrosive Sublimate as a Disinfectant Against the Staphylococcus Pyogenes Aureus.

BY B. MEADE BOLTON, M.D.,

Director of Bacteriology, Hoagland Laboratory, Brooklyn.

A. C. Abbott (Johns Hopkins Hospital Bulletin, No. 12, April, 1891) publishes the results of test made upon cultures of the staphylococcus pyogenes aureus with a 1:1000 solution of corrosive sublimate. Abbott finds that the disinfectant power of corrosive sublimate in the above concentration, when tested by methods which exclude the carrying over of minute quantities of the disinfectant, is not so great as has been claimed. He holds that in many of the experiments heretofore made to test corrosive sublimate, the latter has been assigned a higher rank than it deserves, because some of it has been transferred to the culture medium, and has inhibited, but not destroyed, the growth.

His experiments were made upon liquid cultures containing sterilized sand. With cultures of this sort he was able, by filtration, to get a better distribution of the organisms in the liquid, avoiding macroscopic clumps, which might interfere with the action of the disinfectant upon the organisms in the center. Suspensions in water were also used—also filtered. Fresh cultures and fresh solutions of corrosive sublimate were used, of course, in every case.

Abbott finds that the number of organisms makes a difference in the efficacy of the disinfectant. The greater the number of organisms the more difficult the disinfection. Cultures vary in their resisting power—organisms from one culture resisting better than those from another. Cultures in beef-tea resist better than suspensions in water. Organisms which remain alive after the action of the disinfectant are retarded in their growth and are weakened in virulence. Corrosive sublimate, in the proportion of 1:400,000, retarded growth in cultures of bouillon containing peptone, 1:600,000 without peptone. The staphylococci, which have been attenuated by the action of the sublimate, regain their virulence when cultivated for some time on ordinary culture media.—*Brooklyn Med. Journal*.

“MAKE somebody happy” was the prescription given by a good physician to a victim of nervous depression.

Translations.

Experimental Therapeutics.

Note on the Use of the Human Lymph in Therapeutics; by Dr. Ernest Magnant (de Gondrecourt).

Translated for the CINCINNATI MEDICAL NEWS from the *Bulletin General de Therapeutique*, Paris, May 15, 1891, by Mon. E. A. Quetin, Juge de Paix, Tonnerre, France.

On the 9th of December, 1890, I deposited, at the Academy of Medicine, a sealed paper in which was explained my new method of treatment of phthisis pulmonalis by the transfusion of a liquid which, for want of a better expression, I gave the name of *human lymph*.

The revelations of the German physician, Koch, had, so to speak, obliged me to take date, at a time when my attempts, although quite promising, did not seem to me sufficient yet in results to be sifted by science.

I pursued my investigations with assiduity. They came to a result; and I desire now to submit to you a brief account of results obtained.

But to begin: What is that liquid called *Human Lymph*? Nothing but the serosity contained in the vesicle of a blister—it is that substance that I denominate *human lymph*, without attaching importance to that designation, which is the base of my treatment.

A lymph, pure and endowed with immunity when mingled in the lymphatic vessels with a pathogeneus lymph, is apt to modify the vitality of the tissues which are immediately under its dependence. Thus, sickly mature age can obtain profit from robust childhood; and when parents become affected with some nosohæmia, they have the faculty of drawing a new life from their children.

Atonic ulcers, sores of a bad nature, will become healed under the influence of the lymph from a healthy subject. Infectious maladies, such as tuberculose, typhoid fever, etc., are successfully opposed by lymphes in a state of previous immunity; by the lymph of those suffering with cardiac, impaludic and even rheumatic affections for the first, or of ancient typhoid sufferers for the second. Cancer itself, recognized incurable by all, may retrocede under the action of a revivifying lymph.

Are those diverse modifications accomplished by the return of normal nutrition? Do they take place through phagocytose; that is, through the destruction of the pathogeneus bacteria which progagate more generally by the way of the lymphatic vessels? Or, are they caused by the penetration of a certain quantity of cantharidine in the liquid coming from the blistering action, in consequence of the laws of osmose? In order to answer those various hypotheses, it will be assuredly very interesting and useful to know the chemical and microscopic composition of the liquid employed.

Anyhow, this new theory has just been substantiated by experience, and clinical facts are imposing it upon our attention.

Before presuming to make transfusion of the human lymph to my patients, I had to make experiments upon myself. Those injections have always been harmless. I never felt the least uneasiness; sometimes, however, there was a little tension, heaviness in the limbs where the injection was made, a slight acceleration of pulse; that was all.

Besides, the utmost precautions were always taken in the choice of the subjects from whom I took my lymph. It alters very quick in the contact of air. The best means to preserve it pure consists in sterilizing it by a heat prolonged, but inferior to seventy degrees, in order to avoid the coagulation of the albumen in that liquid. The various chemical agents I had tried, without success, coagulated it or altered its nature. I now simply preserve that substance from the contact of air in small vials colored and corked with emery; and, in those conditions, it may keep all its properties of purity, freshness and inalterability for whole months. The lymph will seldom coagulate spontaneously. I nevertheless witnessed that phenomenon sometimes. It is easy to remedy it in using a concentrated solution of chloride of sodium to be mixed with the lymph, and which, in keeping it liquid, does not in any way alter its properties.

The injections of human lymph, in localized chronic affections, produce surprising effects. A vast varicose ulcer of the leg, which during several years had resisted the most various treatments, was completely healed in less than one month, after four injections of one gramme.

An enormous gland of the neck, with a lymphatic young girl, melted as by enchantment after one single injection. In another case, the liquid had been introduced by the syringe of Pravaz in the midst of the glandulous tissue itself. A

suppurative inflammation resulted which ended anyway in the melting of the ganglion, as in the scrofulous abscesses (abcès froids) of ordinary occurrence. But, in the practice of those operations, it is more rational to be guided by the anatomy of the lymphatic vessels, and to direct the injections from the superficial parts toward the deep organs—that is, in the sense of the valvulæ—in order to facilitate the penetration of the modifying liquid, into the lymphatic system.

In regard to the use of my new method against *phthisis pulmonalis*, I am bound so far to make reserves; for I have at present only one clinical fact redounding to its credit.

It is about a young married woman, twenty-two years old, who had been coughing for several months, with paleness, emaciation, and dry, cracking sounds at the summit of the left lung. Truly, no bacillus of Koch had been discovered in the *sputa*; but nevertheless there was no doubt as to an imminent tuberculization.

Three injections were made, on the 3d, 5th and 8th of November, 1890, with the lymph from a cardiopathist. The patient received at the same time a tonic treatment: wines, ferruginous sirups, large doses of sugar in decoctions of malt, etc. The amelioration was promptly produced, and, to-day, that young woman is perfectly cured.

I am now treating a young man, nineteen years old, with whom phthisis has reached the period of softening. The general state is very grave. The whole right lung is invaded by tuberculous degeneration. Two injections have been made at eight days' interval with the lymph from a rheumatic sufferer. The place elected for them is the right lateral region of the neck, as near as possible to the trachea, so that the transfused lymph may penetrate to the summit of the lung through the lymphatic network. I intend to follow attentively all the phases of that disease, and the treatment submitted to, and at the earliest opportunity to relate my observations.

In conclusion of this note, I am going to give the relation of a case of cure in every respect remarkable of a diabetic ulcer:

C—, a hotel keeper, fifty-five years old, affected, in October, 1889, with a diabetic gangrene of the left foot, at that time had his left leg amputated in its median part. The operation was performed by Professor Gross, of Nancy, with the most thorough antiseptic precautions. The circular flap of the stump sloughed, and only a partial cicatrization could

be obtained. In the central portion of the stump, even with the section of the tibia, a rounded ulceration remained, of a diameter double that of a five francs piece, and its cicatrization could not be obtained. The most diverse dressings were tried by turns: iodoform, salol, aromatic wine, etc. Nothing would avail.

In February, 1891, the ulceration, pale, grayish, without fleshy granulations, seemed to become larger. The patient was in a terrible anxiety and already feared the return of gangrene. I was also greatly concerned.

The urines analyzed contained eight grammes of sugar per litre. It was then that I proposed to him the treatment by injections of human lymph, which he earnestly accepted. The lymph was taken from a young girl, sixteen years old, well constituted and robustly healthy.

Nine injections of one gramme were made around the stump, and at about five centimetres from the edges of the ulceration: one on the 4th of February, two on the 6th, three on the 9th, and, lastly, three on the 13th of February.

The result was marvelous. An inflammatory activity began around the ulceration. The stump was painful. The ulcer became red, turgescient; its edges, formerly jutting and ragged as if nipped, became immediately covered with fleshy granulations, and the sore proceeded quickly to cicatrization. We only continued the dressing with iodoform.

To-day, on the 1st of April, the cicatrization is complete.

Measures to Favor the Expulsion of Hepatic Calculi.

Translated from the French for the CINCINNATI MEDICAL NEWS by Dr. H. Illovy, Cincinnati, O.

When a calculus is arrested in one of the biliary conduits, it can be said that it has already run a part of its course, and that all we should seek to do is to favor the dilatation of the canal or conduit. If the calculus is not voluminous, and if the symptoms are not very grave, we may accomplish our purpose with the tincture of belladonna and placing the patient in a warm bath; during the paroxysm we can have him inhale the vapor of a mixture composed as follows:

Ry—Alcohol,	5i
Chloroform,	5ij
Ether, sulph.,	5iij

M.

Moreover, we can administer an emetic or a purgative, so that the efforts of vomiting, or those of the stool, may hasten the expulsion of the calculus. Although the opiates are contra-indicated in the majority of hepatic diseases, we must make an exception in their favor in case of arrested calculi, and in all cases where the pain is extremely severe a hypodermic injection should be given in the epigastric region. We should, however, never neglect to administer belladonna. When it is associated with opium, we must give the dose every two hours until the physiological action of both drugs is obtained.

It is unnecessary to add that the anodyne treatment can be employed likewise in the form of liniment, plaster or suppository. Gentle friction can likewise be made with the left hand, from right to left—not from left to right—and light pressure from above downward can be made, directing the biliary bladder toward the umbilicus. During all this time we may allow the patient to drink warm alkaline water; for example, a teaspoonful of bicarbonate of soda in a glass of pure water, or of milk and water. We can not give too much of this warm alkaline drink, because it soothes better than anything else; it soothes the irritability of the stomach, it facilitates emesis; finally, it influences favorably the secretion of the bile, an abundant flow of which favors the passage of the calculus. We should not neglect to administer an active purge of mercury with an alkali. Harley advises the following:

R \bar{y} —Hydrarg. C. Creta.,	grs. vii
Pulv. Rhei,	grs. iiiss
Magnesia,	grs. xxviii
M. fr. pul.	

Harley has devised a procedure by which to provoke the expulsion of a calculus whose volume does not exceed that of a hazel-nut, a procedure which consists in digital manipulations practiced through the abdominal parietes. He cites one sufficiently grave case, in which death was thought imminent, wherein he was enabled to provoke its expulsion into the intestine after having manipulated the distended gall bladder for ten minutes; in another patient, subjected to the same treatment for more than two years, he has obtained the expulsion of more than 200 calculi. Many other facts of the same kind could be cited. This is how he proceeds:

When the gall bladder is distended, its fundus lies directly

against the abdominal parietes; it is then very easy to make pressure upon the fundus with the tips of the fingers upon the integument, and, as in the case of the rubber bulb, the pressure will suffice to drive the contents of the organ into the biliary canals, and thence into the intestine. These massage manipulations should be made every day for ten to twelve minutes, and this, under certain circumstances, for months.—*Jour. of Med. and Prac. Surgery.*

Treatment of Exophthalmic Goitre.

The treatment must be based upon the various indications founded upon the etiology. The most important of these is the existence of a certain anæmia. The preparations of iron are very useful in these cases. But if there be no anæmia, their effect is, on the contrary, bad, and their employment aggravates the symptoms. The indications for them should therefore be carefully weighed. At the outset of an exophthalmic goitre we should pay attention to the very frequent menstrual troubles. These disturbances may furnish useful accessory indications; but, at an advanced period, they are ordinarily rather the result than the cause of the malady.

The fundamental therapeutics of goitre embrace two classes of measures: hydrotherapy and electricity. The hydrotherapy should always begin with lukewarm, or rather warm, douches. Cold douches, suddenly given, would aggravate the cardiac phenomena to such a point that the patient would very soon renounce their use. It is only by very gradual transition through a longer or shorter time that we can bring the patient to the cold douche. The duration of the douche should also be progressively increased—at the outset not more than twenty-five or thirty seconds, or even less. The douches should be given daily. It has been at times proposed to give them twice daily, but this produces extreme fatigue.

Electricity has been employed in diverse forms. One of the best is the bilateral electrization of the neck by continued ascending currents. This electrization is practiced every day. The intensity of the current should be feeble; eight to ten elements suffice. M. Charcot recommends the combined use of galvanization of the precordial region and faradization of the neck.

As to medicines, this is the treatment which has appeared to me as efficacious at the outset. The treatment consists in

the simultaneous employment of arsenious acid, of bromide of potassium, and of the milk diet. The arsenic is given at meal times in quantity of four milligrammes, divided into two doses. The dose is gradually, with interruptions, carried to six milligrammes, and rarely to eight milligrammes. The bromide of potassium is given in doses of two grammes, then of four grammes, per day. This quantity is taken in two doses, in the morning and afternoon, between meals. As to the milk diet, in the mild forms of the disease it need only be partial; in the graver forms it should be absolute, and then forms one of the most efficient measures of easing the patient. This treatment must be patiently continued for weeks and months. Most frequently it eases the patient, but positive cures are exceedingly rare.

Many other remedies have been proposed. Friedreich recommends the prolonged use of quinine in doses of fifty centigrammes to eighty centigrammes per day. This is a fatiguing, unpleasant treatment, and has never given me any results. Bacelli recommends the bromide of camphor, one and one-half grammes per day; M. Lee recommends the tincture of veratrum viridi, ten to twenty drops per day, given in three doses. As to iodide of potassium, or iodine, which one is usually tempted to give by reason of the goitre, I would beg you to remember that it is really the most injurious and worst tolerated of all medicines.

Another, but very delicate, treatment, sometimes very useful, sometimes very injurious, is the application of ice over the precordial region and the neck. Never use this treatment unless you can carefully superintend it yourself. In this case you should see your patient at least twice daily. This treatment can, in reality, increase the circulatory disturbances, instead of regulating them. It can also—and herein lies its great danger—determine inflammation and sphacelus of the very thin and distended skin which covers the thyroid body. Its use, which has sometimes given great relief, must therefore be carefully watched.—*Gaz. des Hopet.*

The Affections of the Teeth during Pregnancy.

Although affections of the teeth during the period of pregnancy have occurred at all times, it was not till 1722 that attention was called to them, and that by Fauchard, who wrote a book on the subject.

"We see very often," says he, "pregnant and nursing women tormented by great pains from some carious teeth, *and we extract them unhesitatingly*, notwithstanding the pregnancy and against the opinion of the laity which believes that such a procedure would deprive the woman of the milk or cause some other untoward accident."

Twenty years later, Burron wrote a memoir on the same subject; then it seemed to have sunk into oblivion. In 1877 M. M. Pinard published an article on the gingivitis of pregnant women. In 1883 the question was again taken up in a thesis of Dr. Henry Didsbury. Dr. A. Fournier has but recently studied the subject in his inaugural dissertation, which gives the actual state of odontological science on this subject.

The public, says Dr. Fournier, has always had a prejudice which consisted in interdicting all chirurgical intervention in the mouth in pregnant women. It was feared that the extraction of a tooth might produce an abortion, and cases have been cited where the expulsion of a foetus before term coincided, in fact, with the extraction of a tooth or the opening of an abscess. It is true that the number of observations of great chirurgical interventions in the genital zone itself during pregnancy, without the occurrence of abortion, is become daily greater since the employment of rigorous antiseptis.

If a pregnant woman has some irritation or transitory neuralgic pains in the teeth, we can recommend to her to have patience, to apply heat, some few hygienic precautions; that is to say, abstention from active intervention. But if the pain be persistent, intolerable, robs her of sleep, embarrasses mastications, destroys the appetite and thus lowers her nutrition, something must be done to relieve her.

The cases of absolute necessity have become much rarer since the teeth are so much better taken care of. Gingivitis never requires surgical intervention, properly speaking. Caries, even penetrating caries, are almost always amenable to well-directed treatment during pregnancy. A dental abscess, consecutive to a periostitis, should be opened for the reason that we should attempt to preserve the tooth, the cause of the abscess. If, however, we find ourselves confronted by accidents of the wisdom tooth evolving during pregnancy, with phlegmon of the face or neck, complete closure of the jaws, we should not hesitate to pry the jaws

open and to remove the tooth, the starting-point of the grave accidents which sometimes are attended with a fatal issue.

Gingivitis is of frequent occurrence in pregnant women. It presents itself with the same symptoms as in the non-pregnant female. Magitot does not admit a special form of gingivitis for pregnant women. According to him it exists primitively already and has an acute exacerbation under the influence of pregnancy.

As it is rare for a female suffering with gingivitis not to have a collection of tartar about the base of the teeth, the first indication is to remove this tartar; if it is very abundant, it may be removed at several sittings so as not to fatigue the pregnant woman too much and not to excite in her a too prolonged reflex irritation. If the gingivitis is slight, the direct application of tinct. iodine may bring about a cure. More intense, the gingivitis will not be ameliorated, except by the application of crystallized chromic acid. Numerous scarifications are sometimes necessary. In the interval between the applications, which should be made every third or fourth day, the patient will derive benefit from the use of gargles of chlorate of potass. and lotions of naphthol.

If one is afraid of the application of chromic acid, resort may be had to the following mixture:

R_x—Chloral hydrate,
Alcoholate of cochleara,
(Ph. F.) aa equal parts.

According to M. Pinard, during pregnancy and during the puerperal state we should treat all the affections of the teeth, but we should do nothing definite in obturation or prothesis; only in cases of non-penetrating caries we can make a filling of metal or amalgam; in cases of penetrating caries, we content ourselves with dressing the tooth and with temporary filling.

M. Magitot sees no reason for any modifications in the treatment of dental caries during pregnancy. He recommends only that the sittings for treatment be very short, so as not to fatigue the pregnant woman.

M. Lecandey puts in a permanent filling if there be no suppuration of the pulp. If the woman is lymphatic, he fills with the gutta percha of Jacob, of Chicago, only.

Dental caries are penetrating or non-penetrating.

In non-penetrating caries of the first degree, immediate filling in the majority of cases; however, certain cases of caries of the first degree, of the base of the tooth, require some occluding dressings, as, for example, concentrated tincture of benzoin, which inhibits contact with the air and the saliva; or dressing with:

R_y—Chloroform,
 Tinct. opii, āā 2 grs.
 Tinct Benzoini, 8 grs.

M.

In non-penetrating caries of the second degree, we can fill immediatly if the dentine be intact, but if the thickness of the dentine be too feeble, we must make preliminary applications of tinct. benzoin or of the above described mixture, and these repeated every two days, for two weeks or a month; after this we can make a permanent filling.

The penetrating caries are with pulp and without pulp.

In the dental caries with pulp, M. Moreau Marmont destroys, at the outset, the pulp with a fine pledget of cotton previously soaked in the following solution :

R_y—Acid carbolic,
 Acid arsenios, āā 2 grammes.
 Neutral glycerine, 6 grammes.

M.

And this pledget is introduced into the pulp cavity as far as possible. The pulp should be entirely destroyed down to the roots. To complete the treatment it is well to pass a fine point brought to a red heat, or the fine point of a thermo-cautery, into the hollow of each root; then apply two to three expectant dressings with tinct. benzoin, and when every trace of sensitiveness has disappeared, the filling is put in.

In penetrating caries without pulp, with painless tooth, the caries cavity and the dental cavity are cleansed, then a single application with tinct. benzoin is made.

But if the tooth be sensitive, then the chloroform mixture above described should be used.

Resumé: Dental caries of the first and second degree should be closed with permanent filling after preliminary treatment. In caries of the third degree, we should content ourselves with a temporary filling.

Finally. Extraction will be reserved for cases of hyper-acute periostitis with pain that it is impossible to relieve, of

dental abscesses with cutaneous perforation, of recurring dental abscess with obstinate neuralgia, and more especially for cases of phlegmon of the face or of the neck consecutive to the evolution of a wisdom tooth. — *Union M. Can. Paris M.*

Is Diabetes Contagious?

In a total of 2,320 cases of diabetes which he attended, Schmitz observed twenty-six times the malady in man and wife or in two intimates under the following conditions, which certainly authorize the raising of the question of the transmissibility of diabetes, at least of certain forms.

Persons, most frequently females, who up to that period had enjoyed excellent health, become suddenly diabetic after having nursed a diabetic, after having slept in the same room, after having lived intimately with them, having embraced them frequently. None of these persons have an hereditary predisposition; none were related, not even distantly, to the patient; finally, no other cause to explain the appearance of the malady could be found.

Schmitz does not seek the genesis of the affection in the anxiety occasioned by the precarious state of a beloved one, or in the grief caused by his death. He has, in fact, renounced the admissibility of moral emotions or etiological factors, since, among others, he did not see glycosuria produced in two patients who were greatly shocked and prostrated, one by sudden and premature death of his only son, the other by the suicide of his brother.

On the other hand, it is not by sexual intercourse that the disease is transmitted, for it is noted, as Schmitz observes—he reports one case—between two persons of the same sex, and furthermore the wives are generally affected at a period when the malady of the husbands had rendered them impotent for some time already.

Among the observations related in detail by Schmitz, there is one of a woman who, having become a widow, married again and seemed to have transmitted to her second husband the malady which caused the death of the first, and which she herself contracted. — *Ibid.*

A DOCTOR in the *Medical Record* cures grippe with *calomel* and *rhubarb*. We are glad to learn that calomel is not yet a defunct remedy.

Patent Medicines.

In his admirable report to the National Board of Health, Dr. Lewis Diehl alludes to the subject of patent medicines, the trade lists of which, he says, embrace a larger number of articles than the pharmacopeia, and their consumption is at least equal to, if not greater, than that of legitimate medicines. It is useless to argue with the public that the pernicious effects of this class of medicines far outweigh their good; that their reputation is based altogether on temporary or imaginary relief; and that, being on this account recommended and resorted to in every emergency, they are likely to do mischief. It is difficult for the public to understand that the manifestations of pain or discomfort are only symptoms of the disease, and that such symptoms, though to the uninitiated apparently identical, may point to entirely distinct maladies, and that, therefore, the remedy indicated by the one may be entirely unsuited, or even hurtful, in the other. Moreover, powerful narcotics or stimulants are often largely represented in these nostrums, and it is easy to understand, not only how temporary relief may be obtained, but also how such drugs, injudiciously taken, may be the direct cause of habits the ultimate consequences of which are moral and mental ruin and death.

By the existing drug law all patent and secret medicines are subject to the same examination as other medicinal preparations, and can not be permitted to pass the custom house for consumption, unless the special examiner be satisfied, after due investigation, that they are fit and safe to be used for medicinal purposes. But how is the special examiner to determine the fitness and safety for medicinal use of a preparation unless he has some standard to guide him? It is true, he can by analysis determine the presence of active medicinal agents, quantitatively as well as qualitatively, but the presence of such agents, whether in large or small proportion, need not absolutely debar the medicine from entry. If, on the other hand, the quality as well as the quantity of active medicinal agents allowable in such medicines were plainly defined, a standard would be established whereby special examiners might regulate their action.

To reach this class of patent medicines, as well as those that are prepared in this country, both United States and State laws are necessary. The following modification of the

plan requiring the publication of the formula upon the label, is proposed by Dr. Diehl as just to manufacturer and consumer :

1. Designate by law what substances shall be regarded as "active" medicinal agents.

2. Designate the extreme quantity of such active medicinal agents as may be contained in a given quantity of a "patent medicine," both with reference to its being the sole active component and to its being combined with other active agents, possessing similar physiological action.

3. Require all patent medicines, whether of foreign or domestic manufacture, to be registered by their full title at some suitable office, under the control of the general government; require also that the uses to which such medicines are to be applied, and that the doses in which they are recommended, shall be placed on record.

4. In the event that such a "patent medicine" contains one or more medicinal agents, classified as "active" within the meaning of the law, require the manufacturer to deposit at the registering office information of the exact quantities of such that are represented by a given quantity of the preparation.

5. Require under all circumstances that the minimum and maximum doses of the "patent medicines" be distinctly printed on the label; and if it contain one or more of the "active" medicinal agents designated as such by law, that their presence be unequivocally stated upon the label; not, however, requiring that their quantity or proportion be stated on such.

"A law of this character would enable governments, and the medical profession as well as the consumer, to form in some degree a judgment of the character and probable effects of a patent medicine, and would generally tend toward ameliorating and preventing the evil observed under existing conditions."

It is evident that the evil can not be altogether abated, and even if the present generation, who are most interested in suppressing the quack medicine nuisances, were to root out the existing vile crop, they would see another equally noxious spring up; and therefore, beside such legislation as is above indicated, the general public needs enlightenment; for while the more intelligent classes already have no faith in a nostrum that is trumpeted as a *cure-all* in the advertis-

ing columns of journals, the low and ignorant classes still seem to have more confidence in the professions of the charlatan and mountebank than in legitimate medicine and the scientific and conscientious practitioner.—*Medical Age*.

Proceedings of Societies.

The Cincinnati Academy of Medicine.—Meeting of
June 1, 1891.

G. S. Mitchell, M.D., President; T. V. Fitzpatrick, M.D., Secretary.

Discussion of a Study of the Snook-Herr Poisoning Case.

Professors Mitchell and Hyndman submitted a study of the Snook-Herr poisoning case.

In the discussion that followed, Dr. Whittaker said:

As the symptoms read, the differential diagnosis would include the consideration of cholera morbus, typhoid fever, trichinosis, meat poisoning, mushroom poisoning, and a mineral poisoning, most especially arsenic.

Cholera morbus might be excluded because of the large number of people affected, but chiefly because of the persistence of the symptoms after the use of evacuants and morphine subcutaneously.

Typhoid fever sometimes begins with gastro-enteric signs so intense as to resemble poisoning, but this is exceptional. It would be impossible to conceive of forty cases all beginning in this way. In the absence of this knowledge the condition of the mind and the course of the temperature would exclude the diagnosis of typhoid fever.

Trichinosis rarely shows signs of such intensity at the outset, and simultaneously in so many persons. Multiple cases of trichinosis have been considered as true cholera, or as poisonings, but not in late years since we have had definite knowledge concerning trichinosis. Characteristic muscle-pains and œdemas at the end of the first week mark this affection.

Mushroom poisoning also leads to severe vomiting and diarrhoea at periods varying from six to twenty-four hours after ingestion, with subsequent nervous symptoms, and unless the history of the case be clear (no mushrooms eaten, for instance) or fragments of fungi be found in the dis-

charges, the resemblance to arsenical poisoning may be complete. The speaker had occasion, a few years ago, to treat one of his fellows in Cincinnati for fly-fungus poisoning (muscarine) and was impressed by the signs of intoxication which supervened within one hour after ingestion. The patient chattered and raved incessantly, and was in and out of bed in constant excitement which he strove in vain to subdue. Inhabitants of Kamtschatka partake of this fungus purposely to secure this kind of intoxication, and the poor are said to drink the urine of these rich epicures to indulge the same passion. In the case reported the stomach-tube quickly relieved the physician.

Meat poisoning, which it is now the fashion to call ptomaine poisoning, we know only in connection with pork and veal. Most of the cases thus reported—as at Andelfinger, 444 cases, 10 deaths; Kloten, 657 cases, 6 deaths—on examination turn out to have been trichinosis or typhoid fever. Nevertheless, undoubted cases, independent of these diseases, have been reported. Perhaps the best-observed cases were reported by Gärtner, of Jena: fifty-eight cases in twenty-five families; one death, in a laborer aged twenty-one, taken ill in two hours and dead in thirty-five hours after taking the food. The other fifty-seven cases became sick in from twenty-four to thirty hours, and recovered in from a few days to two weeks. The main symptoms were enteritis, prostration, sopor. The discharges were studied bacteriologically with the discovery of a so-called bacillus enteridis, which was cultivated and inoculated in various animals. As a rule the symptoms of meat poisoning show themselves later than those of arsenical poisoning, sometimes not until the day following the ingestion of the poison. Groenouw confirms the statement of Ulrichs that in all severe cases of meat poisoning there is both dilatation of the pupils and disturbance of accommodation.

Arsenic shows itself by gastro-intestinal irritation and narcosis. The practitioners in these cases, debarred from tests of the vomited matter at the outset, by the absence of all knowledge of other cases, very properly had the urine (in which arsenic has been detected at any time from five hours to two weeks after it has been taken) examined as soon as suspicion was aroused. Arsenic has been found in the liver four hours after administration, and has been wholly eliminated from the body in two weeks. Flaudin found that fifteen grains might disappear wholly from the

body of animals in three days. It is pretty universally distributed over the body, including the nervous system and the bones. In his experiments with animals, Scolosofoff found arsenic thirty-six times oftener in the brain and cord than in the liver, and in the muscles four times oftener than in the liver. Rand reports a case of exhumation and examination of the contents of the stomach two weeks after death, with negative results, and a re-exhumation and examination of the soft parts two months after death, with positive results. Sonnenschein found arsenic unequally distributed in the bones, but mostly in the pelvis and adjacent vertebræ. So arsenic has been detected in bodies three, eight, ten, by Altschul fourteen, and by Steinhauser twenty-two, years after death.

Inasmuch as the symptoms vary so much that an absolute conclusion can not be based upon them, or upon the lesions, though both symptoms and lesions read like arsenic in these cases, absolute proof here must rest upon exhumation of the bodies of some of the six victims and examination of the viscera and bones.

Dr. G. A. Fackler agreed with the essayists that the evidence presented in the paper argued strongly in favor of their theory. Although it can not be positively asserted that arsenic was the toxic agent, still, assuming this to be the case, the appearance of all symptoms can be readily explained. He could not, without exception, agree with the previous speaker as to the discovery of arsenic in bodies of all individuals who had died from the poisonous effects of that drug, even if such bodies be exhumed months after death. It is true that a large number of cases have been reported to substantiate this statement, Yet an equally large number have been reported that would contradict it. We can easily reconcile such apparent contradiction by remembering the fact that arsenic is rapidly eliminated. The first class of cases, then, includes those in which the period between ingestion of the poison and death is brief—too brief to insure complete elimination. The second class, to which the one under discussion belongs, includes those in which considerable time has elapsed after the administration of arsenic until a fatal effect ensues, thus permitting the entire or nearly all of the amount absorbed to leave the body. We must not forget that the toxic effects of arsenic are not due to its direct action upon the tissues. If the agent be injected subcutaneously, the same changes will be observed

in the internal organs; *i. e.*, the degeneration of glandular organs, submucous structures of the gastro-intestinal tract, manifestations on the part of the pleura identical with those described in the paper of the evening, etc. This action is due to the fact that arsenic, after its absorption, acts alternately as a reducing and an oxidizing agent, arsenious acid being changed by the absorption of oxygen into arsenic acid; and, again giving off oxygen, this is changed to arsenious acid. Such changes produce a rapid interchange of oxygen within the protoplasmic structure of the organs in which either of the acids finds entry, and must exercise a destructive action upon them. Thus arsenic sweeps, like a fire, through the organism and, in cases in which life is prolonged, disappears, leaving devastation behind. In these very cases (and the one reported probably belongs to this class) the alterations and degenerative changes produced are of such severe character as to result in a loss of the functional power of the affected organs that must lead to a fatal termination. Exhume such bodies and the closest scrutiny and most accurate analysis of all tissues will not disclose a trace of the poison.

It is true that our knowledge of ptomaines and their action is very meager. Yet we must not disregard the possibility of their existence. Cases have been reported, especially in Italian literature, in which chemical examination has disclosed the presence of various mineral poisons and alkaloids, and a more careful examination revealed the fact that the symptoms observed ante-mortem, as also the post-mortem changes, were attributable to the presence of certain ptomaines.

Dr. S. P. Kramer said that he thought that the fact of copper being found had not been sufficiently dwelt upon. Arsenic was rapidly eliminated from the system and copper more slowly; therefore he thought the possible source of poison in these cases might have been the tri-arsenite of copper, or Paris green as it was more commonly termed, which contained a large amount of copper.

Prof. Dickore said, in answer to a statement made by the previous speaker in reference to Paris green, that it contained a larger amount of arsenic than copper, and that the former was more quickly eliminated from the system than the copper. He still thought that the presence of copper might indicate one of the sources of the poisoning. By very careful work he had obtained several little black spots

on white porcelain, which looked exactly like those produced by arsenic. Under other circumstances, when no medico-legal question was involved, he would have called these spots "arsenic"; since they were too small to produce all the arsenic reactions he could not make any other report than the one he had given the coroner. Small quantities of arsenic were sometimes found in medical preparations, as for instance in subnitrate of bismuth. It would have been interesting to have the bismuth administered in these cases examined for arsenic. It must also be remembered that arsenic is by no means of uncommon occurrence in some sections of Kentucky, Ohio and Indiana. Most iron pyrites, and the water of some mineral springs, contain arsenic. Traces may enter the human body from such sources. Copper is sometimes found in articles of diet. Cases are on record in which fatal poisoning has happened from eating pickles colored with copper; also from other dishes of acid reaction kept or prepared in copper vessels. The speaker had met a brother of Mrs. Snook who had just recovered from the poisoning, and who said that an aunt who had eaten none of the chicken salad had become sick and died; another relative had partaken of everything, but had drunk no coffee or water from the silver pitcher on the table; this relative remained well. These facts speak against the theory of ptomaine poisoning. In the case of the brother of Mrs. Snook, it was stated that the solid parts of his discharges were of a tea-green color; this points toward copper poisoning. He was under the impression that the water in the silver pitcher contained the poison. He also stated that the taste of the coffee was disagreeable, to such a degree that he could not even yet bear the smell of coffee. The speaker said that in his opinion the mystery was not entirely cleared up. He would recommend that the bodies of some of those who had died first be exhumed and carefully examined; should they all contain copper and arsenic, then Paris green was the poison; but should they show copper only, or only arsenic, then the one or the other of these metals would be the cause of death. The young man referred to had ulcers of the lips, gums and tongue, such as are resultant from mineral poisons.

Dr. Mitchell, in reply to a question of Dr. Evans, stated that he had very recently received a letter from Dr. Irwin, of Louisville, who had treated many of these poisoning

cases; that up to that date no post-arsenical paralysis had appeared in any of his cases.

Dr. Hyndman, replying to a remark of one of the previous speakers, warned him that in case any of the bodies now buried should be exhumed and copper should be found on chemical analysis, not to jump to the conclusion that that metal was the cause of death unless found in very large quantity. As stated in the report, copper is so often found in chemical analyses of the body, that it is claimed by some chemists to be a normal constituent.

St. Louis Medical Society.

Stated meeting Saturday evening, May 30, 1891. J. C. Mulhall, M.D.,
Vice-President, in the chair.

Dr. Meisenbach read a paper detailing case of

Suspected Cancer of Uterus,

and presented specimens of brain, kidney, uterus, ovaries, Fallopian tube and a portion of the bladder.

Dr. Meisenbach said: This case was under the care of Dr. Treutler. On the day following the death of the patient, the speaker made a post-mortem, but was chagrined to find that the undertaker had already exercised the embalmer's art, and had injected the thoracic and abdominal arteries with his peculiar antiseptic fluid; by this the peritoneum, both parietal and intestinal, was very much altered in character; and the possible impaction of the bowel, referred to, it was impossible to demonstrate. Portions of the bladder were much constricted; even to about one-third the lumen of the portion not constricted. The tissues were indurated and had lost their natural color; both the anatomical and pathological character, so far as color and texture were concerned, could not be well ascertained. The bowels were fairly empty, a few small scybalæ were found in the intestinal tract; otherwise there was nothing to lead one to suppose there was any obstruction whatever. This was also the case with the stomach, which, on account of the intense action of the embalming fluid, was in a condition that rendered it impossible to make a satisfactory examination of it. The brain was examined and is here presented. Upon removing the calvaria the dura was found moderately injected; and on incising the dura and lifting out the brain, the pia

and arachnoid presented patches scattered over the surfaces of each, the pia especially, and along the tract of the longitudinal sinus were a number of hæmorrhagic spots, visible even after the brain has been immersed in Mueller's fluid. There were small shreds of coagulable lymph, which seemed to connect the dura and arachnoid, so that in all probability the nervous symptoms, mentioned in the report, were due to inflammatory action in the meninges; possibly a lepto meningitis.

This same condition extended not alone to the periphery of the vertex of the brain, but also over the base. There seemed to be a general thickened condition of the pia and arachnoid. When the abdomen was opened, the peritoneum presented the appearance of tanned leather, due to the action of the embalming fluid; this condition excluded an examination of that portion of the abdominal cavity. The organs situated retro-peritoneally, especially the kidneys, when removed, presented a very beautiful exemplification of pyonephrosis. There were pockets filled with pus, and on the mucous surface of the pelvis of the kidney were eroded and irregular patches. Structural changes in the kidney were also very apparent. The cortex was much narrowed and constricted, and the pelves of the kidneys were changed in character; and withal the symptoms of surgical kidneys were extensive, as if long continued suppuration had taken place. The bladder was also implicated. Although immersed in carbolic acid water and alcohol, the changes in the mucous surface of the bladder are very apparent. There are seen irregular, eroded, denuded patches, as well as those hæmorrhagic, between them, showing there has been an atrophy of the mucous membrane; and in consequence of that, an eroding and corroding process; so that we have minute vessels opened, and hæmorrhage taking place in the submucous structure of the bladder. The organ of the greatest interest is the uterus, in respect to its condition, and that of its appendages. In the report it is very clearly stated that a very prominent gynæcologist of this city made the statement that the lady was suffering from cancer of the uterus; yet the uterus was found to be in a state of senile atrophy; and no indication anywhere about the uterus or its appendages of infiltration of a cancerous or any other nature. The endometrium is much congested; a section through the longitudinal axis being made, a quantity of grumous blood was found on the surface, much

changed; this change extended not alone through the mucous membrane, but the muscular and parenchymatous structure also, constituting chronic endometritis. The left ovary was found in a state of cystic degeneration; the parenchymata of the ovary having been completely absorbed, and nothing left of the Graafian follicles; whilst on the right side the ovary was completely atrophied, due to the senile changes that had pervaded the entire system.

Dr. Fry inquired the immediate cause of death.

Dr. Meisenbach thought it was due to the condition of the brain—the sequelæ of inflammatory action—lepto meningitis.

Dr. Fry rejoined he had heard it suggested that possibly death was due to uræmia; but no marked evidences of uræmic poisoning were present; the disturbance in the meninges was sufficient to have produced death, in a person debilitated, as this person was, more especially when other organic diseases were co-existent; the several attacks of acute pain that she had, suggested organic disease similar to that of those who had been seized with the epidemic disease and had succumbed to it, as the immediate cause of death. The speaker had seen several cases where he was perfectly satisfied that the patient had a meningitis, but all of these were feeble patients, who had suffered previously with some other organic complication.

Dr. Meisenbach continued. Clinically and pathologically speaking, it is difficult, at times, to differentiate between affections of the kidneys and of the bladder. As in this case, a patient may complain of indefinite pain along the tract of the ureter in the region of the kidney, and at the same time present symptoms of cystitis, and pus epithelia being present in the urine. In such cases it is difficult to make a fine distinction, and determine which preponderates. The only method would be to differentiate the location of the pain and uneasiness. If a patient complains for a long time of tenesmus during or after urinating, and of extended pain along the tract of the ureter on either side, and located in one of the lumbar regions, we are justified in assuming that a pyelitis or that a suppurative condition of the kidney itself is present. The primary condition may be localized in the bladder; or it may be in the kidney; so, clinically, we may sometimes be in doubt. A very fine distinction was made by Prof. Pfister, of Augusta Hospital, in Germany, in which a female patient complained of symptoms similar to those

found in this case ; namely, there was pus in the urine, pain in the region of the kidney, and symptoms that pointed to pyelitis. The speaker saw him empty the bladder, wash it out with a mild salycilic solution ; then introduce a catheter into the bladder, and while the bladder was still empty, and free from any possible contamination by pus that had been secreted by its coats, he produced bi-manual pressure upon the kidney, especially on the region of the pelvis, and in that way demonstrated a flow of pus through the cavity. That was a very unique case. Such a diagnosis can not very frequently be made.

The diagnosis of cancer of the uterus is a mistake very readily made ; and possibly the opinion was expressed when the diagnosis of uterine disease, especially of cancerous nature, was not as readily determined as at the present day. The gentleman who made that diagnosis of cancer probably predicted it upon a microscopical examination. It is doubted, at the present time, whether in the initiatory stage of cancer of the uterus, it is possible to make a correct diagnosis. The speaker sympathized with that view, for the reason that the elements which enter into a cancerous affection may be so incipient and so sparsely developed in the tissues, that in the small portions taken away for microscopical examination, the characteristics may have eluded the search of the examiner ; and, instead of making many sections, may content himself with making a few. The hæmorrhage, if it takes place from the uterus, is readily explained by the condition in which we find the endometrium ; namely, endometritis, the parts being very much congested and filled with blood.

Fractured Patella—Wire Suture—Perfect Result.

Dr. Lutz said : Some time ago he had the pleasure of reading notes of cases of fracture of the patella, and exhibiting patients ; notably a man who at that time was fifty-five years of age, and upon whom the speaker had operated in the previous February, for fracture of the patella. His history was, that on the first of January before he had fallen upon a slippery sidewalk, and when speaker visited him, he had synovitis of the knee joint, which was treated by aspiration and subsequently immobilization ; he recovered so as to be able to walk about ; the weather being again of a kind that makes sidewalks slippery, he fell again, and fractured the patella of the same leg. The mode of treatment suggested was wiring the patella, to which he submitted. A perfect

result was attained, because the motion of the joint was perfect, and union was secured. He had no trouble with the knee after he recovered from the operation. He died about a month ago of carcinoma of the pylorus, with a typical distention of the stomach; the stomach retained a large quantity of fluid, and for its removal it was necessary to introduce a stomach tube, almost daily. The specimen presented is illustrative of the practice now sanctioned by many operators, notably by Dr. Phelps, of New York, who reported, in the last November number of the *New York Medical Journal*, quite a series of cases, in which the operation was done primarily with very good results. It is well known that the chief difficulty, in securing an osseous union of the segments of the patella, is the interposition of the popliteal aponeurosis—the aponeurosis which is formed by the tendon of the quadriceps extensor passing over the anterior portion of the patella, which is ruptured, and then folds down over the fractured surface, especially over the upper fragment; and becomes so firmly welded to the broken surface, that it is necessary, in doing the operation, to pick it off, as it were, with the forceps. Macewen demonstrated this fact many years ago, and although we obtain very good results from the so-called fibrous union—the formation of a tendon between the two fragments—still the limb suffers in consequence of the absence of osseous union. The gait may be almost perfect on level ground, but the patient experiences difficulty when he attempts to ascend a flight of stairs, the proper and graceful locomotion of the individual is interfered with, because of the absence of osseous union. This specimen illustrates the manner in which ordinarily the silver wire is introduced, and also the complete osseous union obtained in a case of this nature. The wire was twisted and pressed down into the sulcus between the upper and lower fragments; in this instance, it extended internally on the articular surface of the patella into the joint itself. It, however, never interfered with locomotion. Some years ago it was considered quite a hazardous procedure to lay open the knee joint—to convert a simple fracture into a compound fracture. By the methods now employed, operating aseptically, possibly with antiseptic precautions, the opening of the knee joint, or the conversion of a simple into a compound fracture, is not held to be the same serious procedure which it was formerly considered to be, and the results obtained, both in the treatment of compound frac-

tures and also in the operations about the joints, certainly justify the position now held by surgeons ordinarily, and corroborated especially by the statistics given by Dr. Phelps. They have incontestibly secured for this operation a permanent position in the surgical procedures of to-day.

In the discussion which followed the reading of Dr. Phelps' paper, as also in a previous discussion, many prominent surgeons in New York held it was not a justifiable operation; but, after all, the results obtained speak much more eloquently than any verbal argument—oftentimes only theoretical—which can be urged in favor of the operation. The speaker had performed the operation ten times, and in all good results were obtained. He had performed the operation primarily, as has been suggested, even before the absorption of the blood—simply clearing out the joint cavity, and performing the operation three or four days after the receipt of the injury. This specimen is presented because of its rarity, and the result of an operation which, in the minds of many, is still *sub judice*.

Dr. French inquired the depth of the suture; whether it is sufficient to approximate the surfaces without passing through the entire thickness of the bone. He had been fearful of doing otherwise than penetrating the entire thickness of the bone, because of the strain required; much force is ordinarily requisite to approximate the fractured surfaces; the force of the quadriceps extensor, drawing the upper fragments upward, with considerable force, must be counteracted by drawing it away; and he had been fearful that the wire might break through if the entire thickness of the bone was not embraced.

Dr. Meisenbach inquired if extension, flexion and the movements that are common to the normal joint were restored.

Dr. Lutz replied, in answering that question, of course he was put upon his individual evidence, but in no case, in which he had done the operation and which he had watched, and he had followed as many as he could, was there stiffness of the joint. This man, for example, could bend the knee of the right side as much as that of the left. Some cases he had not been able to follow; but he could possibly put his hand on five or six, and these patients invariably had a better joint when discharged than in the cases treated formerly, after the mode of Dr. Hamilton. He ventured

to say that a nearer approach to a physiological joint has been obtained than had obtained in the other instances.

Dr. Meisenbach rejoined. The position that a great many surgeons take is this: If we can not guarantee a bony union, even when the operation suggested is performed, why should the patient be subjected to this jeopardy—why cause this risk? Although the amount of risk be small, in proportion to the number of cases operated on, under the present aseptic precautions, there is still a risk.

Metzger, of Amsterdam, has instituted a procedure, which he had the pleasure of seeing him pursue in the operation, in a number of cases. The position taken by him, and followed by many of his disciples, is this: that it is not of so much consequence that the bone be restored to continuity, as that the muscles of the thigh, and especially the quadriceps extensor, should be kept up in its physiological condition and tone. They claim that the period of rest and confinement causes the muscles to lose their tone; therefore the patient loses the utility of the limb; and that to this alone are due the untoward results of the fracture of the patella; and upon this basis he instituted a plan of treatment which he calls massage of the limb. Within four days after the receipt of the injury, having placed his patient upon his back and upon a posterior splint, he begins massage of the limb once or twice a day, gradually rubbing the fragments and massaging the parts above. He does this two or three weeks, when the patient is gradually allowed to get up. Ligamentous union occurs in due time, one, two, three or even four inches in length. The speaker saw a number of patients that he had treated in that way. One patient had passed a period of three years with an extension between the patellar fragments, at least four inches in length; and yet, that patient was able to walk, run and jump so naturally that no one would suspect that there had been any injury to the leg. Now the question arises, if this is possible by Metzger's method, why should an operation be performed which must be more or less dangerous to the patient? It is true we work aseptically and antiseptically, but it is impossible always to keep the knee aseptic or antiseptic; and accidents may occur to the best of operators who have performed operations on the knee joint. The speaker felt if for a patient a fair joint can be secured without operative interference—something that would approxi-

mate the normal joint—he would accept that, and believed his patient would be better off without the operation.

Dr. Johnston inquired how long the patient lived upon whom the operation was performed.

Dr. Lutz.—Nearly four years.

Microscopical Specimens.

Dr. Riesmeyer presented some microscopical sections and said: The first section was taken from a specimen which he presented to the society several months ago. It is from a parametritic abscess. The abscess was located within the layers of the broad ligament, implicating the ovary and tube; the tube, ovary and part of the broad ligament were removed. At that time a member of the society took the position that it was not a parametritic abscess, but a pus tube; probably because he had not thoroughly examined the tube. Sections of the tube satisfactorily demonstrate that there could not be any circulation in the tube, the epithelium being absolutely intact, there being only a papillomatous proliferation of the mucous membrane of the tube. The tube, however, is very much thickened by inflammation and new connective tissue, as the speaker supposed at that time, even before he made a microscopical examination. Besides a large amount of connective tissue, there are a great number of vessels and some round cells. The main point of interest, however, is the condition of the lumen of the tube, the epithelial cells being absolutely intact, and no connection anywhere of the tube with the abscess cavity. The patient is doing well, has increased in weight, and is, to all intents and purposes, a well woman.

The second specimen is from an epithelioma of the lower lip, removed from a young man, æt. 21. The peculiarity of it is the arrangement of the epithelial cells. They are formed into plexuses; it is a plexiform epithelioma, which is very rare at the age of this patient.

The third specimen is an epithelioma of the nipple, removed from a woman, æt. 69. Epithelioma of this organ is also rare, and on this account it is presented. It was at first a question whether the lesion was an epithelioma or a chronic ulcer; there being no plain proliferation of epithelium upon it, in the subcutaneous tissue, nor any beds of epithelium; but the epithelium is seen penetrating the lymphatic spaces in the same way as in the other specimens, where it forms a net-work. The patient is otherwise

perfectly well; has never been sick; nor is there history of tubercular trouble or syphilis.

Dr. French desired the doctor to explain how he arrived at the conclusion that it was a papillomatous growth? It appears to my uneducated eye to be normal epithelium.

Dr. Riesmeyer replied: The gentleman is perfectly right; the epithelium is perfectly normal; but all the tubes that the speaker had examined had as many folds as are seen in this one; here are at least five or six times as many as are in the normal tube. He had never seen in the mucous membrane so many folds as there are here; blenorrhœa of the eye presents a very similar appearance. While it can not be absolutely declared that it is pathological, he thought an inflammatory process had caused this appearance. Sections were made from specimens taken from three different places; in all these folds were found.

Microscopy.

Original Investigations in Regard to Bacilli.

BY JAMES BARNSFATHER, M.D., CINCINNATI, O.

Early in the spring of 1875 I commenced a study of bacilli, having at that time accidentally discovered them by the microscope in some fluid drawn from the thyroid gland of a young girl who died from scarlatina maligna (see the CINCINNATI MEDICAL NEWS of May, 1888, p. 332), and later in the same year (1875), finding bacilli in the sputa of a man who died from phthisis pulmonalis (see the CINCINNATI MEDICAL NEWS for June, 1888, p. 406).

From that time on I have been intensely interested in those microscopic creatures, their life cycles and their products, and their antagonisms between themselves, *as well as their influence on those in whom they have for the time being had their existence* (see the CINCINNATI MEDICAL NEWS for October, 1888, p. 720).

In an article that was published in a Cincinnati medical journal of January, 1890, I gave a few of my experiences with antagonistic bacilli, up to that date, but as I was at the time suffering from a severe attack of "la grippe," my remarks were very brief and unsatisfactory, but they contained the essence of my principal experiments at that time, and, as

I thought I would not recover, I hoped that some younger bacteriologists would take up the investigations where I had left them, after getting the "cue" from my papers, but, so far, I have not seen any articles on the subject.

In this paper I will take up only one of my investigations, as the subject is at present convulsing the whole medical profession on both sides of the Atlantic, viz.: the amelioration or cure of phthisis pulmonalis. Five and a half years ago (in the winter of 1885), a friend of mine who was suffering from phthisis, and whose father, sister and brother had all died with the disease, was accidentally inoculated with the *materies morbi* of rheumatism, and who at the time had consolidation of the lung above the right nipple, a bad cough and sputa, etc., etc. Her lungs at the time were examined by another physician (whose diagnosis was the same as mine), and who attended her through the case of rheumatism. She recovered her health, and is now, to-day, a well woman, with no cough or sputa, and weighs over two hundred pounds. Here we have, without doubt, the antagonistic action of the rheumatic bacillus against the bacillus of phthisis pulmonalis. I have been in Europe all winter, and at the present time have experiments in process, to prove the truth of my statements. A number of eminent doctors, with whom I had interviews, stated emphatically *that they had never found the rheumatic diathesis in combination with the phthisical condition in the same patient*, consequently I feel encouraged to bring this investigation before my brother physicians, in the fond hope that I am recommending a treatment that will antagonize (I believe) that "*pons asinorum*" by which our profession has so long been baffled. The "*modus operandi*" I will, for the present, withhold until I hear further from the gentlemen who are performing the experiments.

METHODS OF STAINING BACILLI.—[By C. F. Gardiner, M.D., of Colorado Springs, Col. From the Phila. *Med. News*.] The method of staining bacilli in early cases of lung trouble, when the physical examination shows little or nothing, has now become such a matter of routine with most physicians that it holds a place as an aid to diagnosis as important as that of examining the urine for albumin and casts in diseases of the kidneys; and a rapid and reliable method of staining the sputa, one requiring but a limited number of solutions and simple technique, is valuable not only to the

busy practitioner, but especially to the medical examiner for life insurance, who, more than the average physician, has to condense his scientific researches.

Articles have appeared in the journals from time to time upon rapid and easy methods of staining, but so far as I have been able to observe, they all have the objection, either that heat is applied to solutions, or much time and manipulation is required. The following method, shown me by Dr. T. Mitchell Prudden, College of Physicians and Surgeons, New York City (it first appearing, I believe, in a Swiss medical journal), I have now used here for three years, often several times daily. In my hands it has been most convenient, rapid and successful, enabling me at times to report upon several cases in a very short time.

Two solutions are made, the first being practically a carbol-fuchsin.

SOLUTION NO. 1.

R _y —Fuchsin,	. . . . .	15 grains.
Alcohol,	. . . . .	2½ drachms.
Carbolic acid (sat. sol.),	½ drachm or 30 minims.	
Water,	. . . . .	2 ounces.

Dissolve the fuchsin in the alcohol by shaking, and to this add the carbolic acid and water.

SOLUTION NO. 2.

R _y —Methyl-blue,	. . . . .	2 ounces.
Sulphuric acid, C. P.,	. . . . .	½ "
Water,	. . . . .	1½ "

Dissolve the acid in the water, and when cool add to the methyl-blue. The cover-glass, being prepared as usual, but with rather a thin film of sputa and lightly flamed, is placed for three minutes in solution No. 1, taken out and washed well in water to remove excess of red, then put in solution No. 2 for two minutes, then washed in water and examined. If reddish masses appear after solution No. 2 is used, the specimen can be inserted again in No. 2 for another minute or so. These solutions can be kept in properly labeled bottles ready for use, and will keep unchanged for some months.

Solution No. 1 is apt to have a coating form on the surface if exposed to the air too long.

There is one point to be observed, which is a vital one: only reliable dyes should be used, such, *e. g.*, as Professor Grüber's aniline dyes. In trying other and inferior dyes I have had decided difficulty in making these solutions stain

satisfactorily. It may be well to mention that to clearly see tubercle bacilli, a microscope having at least a good one-sixth objective, that, with an Abbe condenser, will magnify from five to six hundred diameters, is a necessity.

[The foregoing is practically what is known as Gabbett's method. The search for bacilli may be further facilitated by adding dilute caustic soda to the sputum and gently heating. In the course of from twenty-four to forty-eight hours the bacilli will have fallen to the bottom. The supernatant fluid is decanted and cover-glass preparations made from the sediment. In this way bacilli may be detected when present in small numbers, and when they might elude detection by another method.—Editor of the Phila. *Med. News*.]

Book Notices

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By Henry G. Piffard, A.M., M.D., Clinical Professor of Dermatology, University of the City of New York; Surgeon in Charge of the New York Dispensary for Diseases of the Skin; Consulting Surgeon to Charity Hospital, etc. Assisted by Robert M. Fuller, M.D. With Fifty Full-page Original Plates and Thirty-three Illustrations in the Text. Large Quarto. Pp. 160. Leather. New York: D. Appleton & Co.

This work is printed upon thick, very heavy paper, having a remarkably fine finish. The type is very large—large pica—and presents a clear and beautiful impression. We never met with a work exhibiting such typographical perfection. No ordinary printing establishment would be able to turn out such an artistic specimen of the printer's art.

In this work the author, as he states, has endeavored to present his subject in the most practical manner and with the fewest possible words. To this end he has avoided all theoretical and controversial discussions, which are of interest to the specialist rather than to the general practitioner. He has also systematically omitted reference to the pathological histology of the skin, as our knowledge of this branch of dermatology is still in an extremely inchoate state, as will be seen by referring to the article on prurigo. The concluding article in the book deals with a subject the importance of which can not be overestimated.

The plates, which are large and beautiful—each one occu-

pying a full large quarto page—were made from photographs taken by the author with the aid of artificial light, which he says his experience leads him to prefer for this purpose to ordinary daylight.

The plates are not colored, but, having been made from carefully taken photographs, they very accurately represent the affections of the skin for which they were designed, and will assist very much in making diagnoses. In fact, they will be a greater help than many of the colored plates of far more costly works, for it is extremely difficult to color exactly according to nature, and, unless this is done, colored pictures rather tend to confuse and lead to error.

The work is designed for general practitioners and medical students. The affections are described in such plain, clear language that there can be generally no difficulty in understanding them. The treatment set forth, in the case of each disease, is such as the author has found to be the most efficient in his very large and extended experience.

THE PHYSICIAN'S LEISURE LIBRARY. Lectures on Tumors from a Clinical Standpoint. By John B. Hamilton, M.D., LL.D., Professor of the Principles and Practice of Surgery and Clinical Surgery, Rush Medical College, and in the Chicago Polyclinic; formerly Supervising Surgeon General, United States Marine Hospital Service; Professor of Surgery in Georgetown University, etc. For the Use of Students. 12mo. Pp. 138. Paper. Detroit: George S. Davis. Price, 25 cents.

If the reading of the title-page of this little work should not create in a physician or a medical student a desire to peruse it, assuredly the sight of some of the engravings representing different varieties of tumors will do so. On one of the pages is a picture of a tumor, bag-like in appearance, which seems springing from one side of the forehead and side of the head, covering one of the eyes, and hanging down nearly the whole length of the individual.

The author states in his preface that not knowing any book on tumors in the English language to recommend to his students, he employed a stenographer to take the lectures as he delivered them; and as the colloquial form has thus been preserved, it is thought to bring a little relief to the hard-and-fast lines in which articles on tumors are usually cast.

The author proposes to supplement this volume by an-

other on the "Tumors of the Regions," in which the operative surgery will be fully considered.

The lectures in the present volume only give the general principles, clinical history, and treatment of neoplasms.

TRANSACTIONS OF THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION. Volume III. Third Session held at Atlanta, Ga., November 11, 12 and 13, 1890. 8vo. Pp. 444. Published by the Association.

This is an exceedingly handsome volume of Transactions, and is highly creditable to the Association that publishes it. The Committee of Publication who arranged the papers, and had oversight of the work as it passed through the press, were W. E. B. Davis, M.D., Secretary, Birmingham, Ala.; Wm. B. Rogers, M.D., Memphis, Tenn.; Virgil O. Hardon, Atlanta, Ga.

The conception of the organization of the *Southern Surgical and Gynecological Association*, we learn from a brief address made by Dr. McMurtry, of Louisville, Ky., originated with Dr. W. E. B. Davis, of Birmingham, Ala.; and largely to his energy and devotion to the work is due the success of the enterprise. Briefly stated, the object of the Association is to further the study and practice of Surgery and Gynecology among the profession of the Southern States.

The work contains the address of the retiring President, Dr. Geo. J. Engelman, of St. Louis. The subject of it was the "Health of the American Girl, as Imperiled by the Social Conditions of the Day." It will be found to be highly interesting and to contain much valuable information in regard to the effects of physical and mental strain upon young women—those who are developing into womanhood. We would like to quote a large part of the address, for we feel sure that our readers would read with much interest what we would present to them, but our space will not permit without excluding other matter that should find room.

Nature has designed that women should bear and bring forth children. This is the primary object of her existence. Man is the wage-earner. On him it devolves to fight the battles of life, to make the living, to protect the family, to develop the sciences, to search for new truths, and foster civilization and enlightenment. To man belongs mental and physical strength. Besides, he possesses mental and physical endurance. "Woman, even woman," says Dr. Engelman, "in all her primitive strength, can not be compared to man in nerve and physique."

Dr. Engelman, further, very correctly states that the life of woman does not run smoothly as does that of man; it is characterized by marked periodicity, by ebbs and flows, by great life-waves, which are dominant in the sphere of her especial functions; waves of vascular tension and nerve excitement, marked by a heightened activity and susceptibility of her entire being, distinctly indicating that woman's periodical activity is not a local process, as we have been taught, but one involving the entire female organization, as it was held to be by the ancients, and exerting a permanent influence upon that organism of whose condition and development it is indicative. This function of woman involves the entire vascular and nervous system, and may be said to be the central exchange of that great network of wires—the vaso-motor nerves—linked with the great sympathetic and the cerebro-spinal system."

The work contains quite a number of valuable papers read before the society by members. One of the papers is by *our* Dr. Thaddeus A. Reamy, entitled "Removal of a Stone Weighing 365 Grains, by Vaginal Cystotomy, from the Bladder of a Child Six Years of Age; Ureter Uninjured; Operations for Closing the Bladder Difficult, but Ultimately Successful. Stone Exhibited."

Other papers were read by Drs. R. B. Maury, Joseph Price, W. H. H. Cobb, Henry Fraser Campbell, W. O. Roberts, and many others. The volume will form a valuable addition to the library of any medical gentleman interested in gynecology and abdominal surgery.

Editorial.

THE AMERICAN SOCIETY OF MICROSCOPISTS. —We attended the first meeting of this Association at Indianapolis some thirteen years ago, taking along with us a fine microscope that we had imported from Germany, as each member had been instructed to bring his microscope with him. The meeting continued, if we remember rightly, three days. On one of the evenings, the local committee having procured a large hall suitable for the purpose, a display was made for the benefit of the public. Every member had his microscope arranged on a table given him with a lamp, and exhibited his mounted specimens to those who gathered about him. Many of the microscopists had rare, beautiful specimens; and the exclamations of admiration and delight

from the spectators on being shown them were earnest and frequent. We remember that we exhibited a number of specimens which, though possessing nothing wonderful to a microscopist, yet elicited many expressions of surprise from those who had never seen or heard of anything of the kind. One of our specimens was an engraving on glass, with a diamond, of the Lord's Prayer, which occupied a space so small that if the whole Bible—Old and New Testaments—was engraved equally small, it would occupy not more space than two-thirds of a square inch. The Lord's Prayer contains 227 letters, which is engraved upon $\frac{20}{100}$ of a square inch. With the letters of the words traced equally small, 4,703,440 letters can be engraved in a square inch; but the whole Bible contains but 3,566,480 letters. The engraving is easily read with a good quarter-inch objective and a B eye-piece.

The next meeting of the Association will be held in Washington, D. C., August 10, and will continue five days. Its membership consists of two classes—1. Professional men and students of the natural sciences, who use the microscope in their daily avocations as an instrument of research, diagnosis, or precision; 2. Amateurs, or those who find pleasure and profit in the revelations of the instrument. In its earlier years, says Dr. F. L. James, of St. Louis, the amateurs predominated; but at present the professional element is largely in excess. In our opinion none but experts should be admitted to membership. On such a condition only can the organization rank as a learned society.

We copy the following from a circular sent us, signed by the president and secretary: "In the 'working sessions,' experts in every department of microscopical technology are engaged in giving manual demonstrations of the details of their lines of work; in the informal evening 'conversaziones,' the room of every worker who has anything special to exhibit or demonstrate, is open for the reception of all those who wish to witness the demonstration; finally, the soiree affords an opportunity of displaying for the benefit of the members, as well as the public generally, all that is most beautiful, interesting, and instructive in the cabinets or laboratories of the exhibitors. Of late years the soirees have been attended by many thousands of visitors in every city in which the society has met, and have been regarded as distinguished social as well as scientific events."

The dues are only two dollars per annum. In return every member is entitled each year to a volume of the "Transactions," worth two dollars. The volumes collect-

ively form a library of microscopy full of valuable matter. The "Proceedings" are profusely illustrated with photo-engravings, autotypes, chromoliths, and wood engravings.

The railroads no doubt will sell tickets to members at the lessened rates usually allowed to persons going to conventions.

INTERNATIONAL AMERICAN MEDICAL CONGRESS.—At the meeting of the American Medical Association, held at Washington last May, Dr. C. A. L. Reed, of Cincinnati, introduced resolutions as follows:

"Resolved, That the American Medical Association hereby extends a cordial invitation to the medical profession of the Western Hemisphere to assemble in the United State in an Inter-continental American Medical Congress.

"Resolved, That the Committee on Nominations be and is hereby instructed to nominate one member for each State and Territory, and one from the Army, Navy, and Marine Hospital service, who shall constitute a committee, which is hereby instructed to effect a permanent organization of the proposed Inter-continental American Medical Congress, and to determine the time and place at which the same shall be held."

The resolutions were unanimously adopted by the American Medical Association, and in pursuance of the second resolution forty-eight gentlemen were selected to constitute the committee therein mentioned.

This committee met at the Arlington, Washington, on May 7th, and constituted an organization. Dr. Charles A. L. Reed was chosen Chairman; Dr. J. W. Carhart, Texas, Secretary; I. N. Love, St. Louis, Treasurer. On motion, the officers were appointed a special committee to draft a constitution, and report the same at an adjourned meeting of the general committee, to be held in St. Louis, Wednesday, October 14, 1891, when the time and place of the meeting of the Congress will be decided upon and permanent officers be elected.

We would have announced this movement to bring about an International Medical Congress of the profession of the Latin-American States with the profession of the United States, in our last issue, but we received the circular sent us by Dr. Reed, the chairman, too late. We have no doubt but that the profession of our country will heartily concur in the effort. Though those living in Mexico, Central America, and the States of South America, live in the same hem-

isphere with ourselves, yet we have far less intercourse with them and have far less acquaintance with them than with those who live in Europe—those residing in another hemisphere. This is not as it should be, for our Latin-American brethren have governments similar to our own. They are a liberty-loving people, and, like ourselves, have rejected the effete notion that kings rule, not by the will of those whom they rule, but by divine right. Now, before the twentieth century comes in, which is very close at hand, the wall of partition which has been separating us should be broken down, and we should come together as brethren, and those of them of the medical profession should join us of the same noble calling, and together feel that we are laboring for the welfare of the human race, and that, as colaborers in a great end, there is not recognized any race, creed, or nationality.

When the committee, which meets in St. Louis in October, has appointed the time and place for holding the Congress, all the medical societies of this country should arrange to be represented in it by delegates.

TREATMENT OF HYPERTROPHIED TONSILS BY MEANS OF IGNI-PUNCTURE.—We are in receipt of a paper with the above title by Dr. Gilbert I. Cullen, of Cincinnati, Consulting Laryngologist to the Cincinnati Free Hospital for Women.

The galvano-cautery, Dr. Cullen says, possesses the power of filling a double office, that of completely dissecting the tonsil and that of merely reducing its size by the cicatrization of the tissue of which it is composed. When it is desirable to use a galvano-cautery snare, he advises the pattern made by Hazard & Co., of New York, as the safest and best adapted for the purpose.

He says that in the selection of the electrode for puncture he employs one to correspond with the size of the lacunæ, and one that requires some slight pressure to insert into the crypt. He first applies cocaine to the tonsil, using a four to ten per cent. solution. Sometimes he employs it in combination with phenol, at other times pure. Either way will insure immunity from all pain and discomfort during the procedure. He prefers, however, the combination with phenol, as he considers the constitutional effects of the latter are less, and the degree of anesthesia greater.

The electrode should be inserted to the depth of the

lacunæ or follicle of the tonsil, and two or three punctures in close proximity should be made at one sitting, to be repeated in from three to six days, as the condition of the glands will warrant. There should follow a soothing antiseptic spray of menthol, resorcine, or a modification of the well-known Dobell's Solution, which formula he considers is somewhat improved by substituting bichloride of mercury in the strength of from 1 to 1,000 to 1 to 4,000 for the carbolic, tr. ferri chlor. and glycerine, equal parts; and many others might be mentioned.

In cases of after-hemorrhages from galvano-cautery puncture, which are very rare, he directs the patient to take a sip of a mixture composed of tannic acid two parts and gallic acid one part, with sufficient water to render it of the consistency of thick cream. This, he states, has invariably checked the bleeding immediately.

Dr. Cullen warns the operator to keep in mind that the external carotid artery is about three-quarters of an inch from the tonsil, and the internal carotid about half an inch. But these distances may be materially increased by traction upon the tonsil, as it has been demonstrated that the cellular tissue between these arteries and the tonsils is elastic and yielding, and does not draw the vessels with it when traction is made upon it.

Sajous states that the soft form of hypertrophied tonsils yields the best results from this method of treatment.

By this method of operating, danger from hemorrhage and septic infection is avoided. Though danger from hemorrhage is rare, yet Agnew, McCarthy, Velpeau, Delavan, and others, have reported alarming cases of bleeding. However much the electrode might be loaded with germs, yet it would be rendered immediately aseptic the moment the current would be turned on—the process of sterilization being performed by the only perfectly reliable germicide—heat.

The degree of heat employed should be that of a moderate red, and kept at that. Pain and hemorrhage result if a black heat is permitted to occur; and there will be danger of injuring the surrounding tissues if a white heat should, through inadvertence, take place during the operation.

Dr. Cullen says that he makes use of the finer pointed electrodes for the puncture and the flat knives for smoothing off any ragged edges or surfaces that may remain.

The main indications for reduction of tonsils by galvano-cautery Dr. Cullen summarizes as follows:

"1. When tonsils have ceased to perform their function by reason of interstitial thickening and occlusion of the lacunæ of the glands, in which condition the mouths of the crypts becoming blocked with the accumulation of sebaceous matter, which rapidly decomposes, they form an excellent culture medium for various pathogenic germs which may ultimately be absorbed into the lymphatic system.

"2. That when a tonsil shows itself competent at short intervals to become inflamed and give rise to peritonsillar abscess.

"3. Where the tonsil is situated that it is a matter of great difficulty as well as danger to use the tonsillotome, and, from extensive adhesion of the pillars, likely to cause severe hemorrhage by their being cut.

"4. In all cases where the patient is of a hemorrhagic diathesis or in other cases in which alarming hemorrhage is feared.

"5. Where patients will not consent to the use of the knife and yet the demand for the removal of the gland is imperative."

IS ALBUMEN IN THE URINE EVER A PHYSIOLOGICAL CONDITION?—Several months ago we discussed this subject briefly in an editorial article, showing that not unfrequently albumen will be detected in the urine when there will exist no evidence whatever of the presence of disease either locally in the kidneys, or constitutionally. We reported the case of a gentleman concerning whom we had been consulted in whose urine albumen, in large quantities, was always found whenever his urine was tested, and though the condition had been known to exist for several years, yet he enjoyed good health. We referred to other parties in whose urine albumen was frequently found, but was not a constant constituent, and no pathological symptoms had ever been manifested as the result. It would seem from these facts that there could exist a *physiological albuminuria*.

Dr. Schrady, in the *Medical Record*, says that nine years ago Senator ascertained to his own satisfaction that there was a *physiological albuminuria*, believing that the source of the albumen is the epithelia of the urinary passages, and of the tubules of the kidneys which undergo periodical desquamation. Under such circumstances the epithelia must secrete albumen from the blood as if they were glands. In menstruation blood is secreted by the epithelia of the mucous or lining membrane of the uterus, the process resulting from a physiological function, which is always pres-

ent during a certain period in the life of a female, its absence being the result of pathological causes. The menstrual flow is not physiological with one woman at a certain period of her life, and pathological with another woman at the same period of her life.

At the annual meeting of the Association of Life Insurance Medical Directors held in New York, Dr. W. B. Davis, of Cincinnati, read a paper on "Albuminuria in Persons Apparently Healthy." In this paper he states that the causes of *functional albuminuria* may be classed as follows: 1. Dietetic; 2. Cold and hot baths; 3. Muscular Activity; 4. Mental Strain, and Strong Mental Impressions.

Dr. Russell, Medical Director of the Ætna Life Insurance Company, he stated, had given him a singular illustration of the first subdivision, viz.: "A professional friend, who is now and has always been in robust health, has for years invariably found albumen in his urine after eating buckwheat cakes. Dr. Batten found albumen in the urine of four young men after a long ride in a cold railway car. Pavy records the fact that when Weston performed his first pedestrian feat in England, and walked one hundred and fifteen miles in twenty-four consecutive hours, his urine, passed an hour after the finish, was albuminous, and contained hyaline and granular casts of the tubules, unaccompanied with blood corpuscles. Twelve hours later his urine was found to have resumed its normal condition. Dr. Wills has a patient, a strong, healthy man, who always has albumen in his urine after taking a boxing lesson. Johnson reports a number of cases of temporary albuminuria as a result of the fatigue and anxiety of a prolonged examination of the civil service. Ralfe said: 'Hardly a season passes but I am consulted by some student who has discovered albumen in his urine whilst reading for his examination, and of whom I hear no further when his troubles are over.'"

Dr. Schraday says that while it is well to bear in mind that albuminuria may occur without nephritis, yet that the habit should not be fallen into of regarding the presence of albumen as trivial and thus overlook the really serious cases. The Doctor, however, is evidently of the opinion that albuminuria is sometimes physiological—functional.

Dr. E. W. Lambert, Medical Director of the Equitable Life Insurance Company, in discussing Dr. W. B. Davis' paper read before the Association of Medical Directors of Life Insurance Companies, uttered the following: "I don't believe in physiological albuminuria. It is several years ago

that there was a good deal said in the medical journals on this point, claiming albumen was a physiological factor in the urine, and I unfortunately examined two men in this city, one of whom (they were partners) had a very heavy deposit of albumen, and I was afraid to recommend him. His partner presented a trace only of albumen, and it was such a very light trace, after repeated examinations, that Dr. Curtis and myself agreed to call it 'a physiological trace,' and we accepted the man. He died in two years of Bright's disease; the other man is still living. We made a bet on the wrong horse."

In an editorial several months ago we showed beyond all reasonable doubt that albumen in the urine not unfrequently is a physiological condition. A number of eminent investigators have discovered albumen in 50, 60, 75 and 100 per cent. of the healthy individuals whose urine they had examined. Under such circumstances it is absurd to assert that there is no such thing as physiological albuminuria. We will admit that when a Medical Examiner has certified that he has found albumen in the urine of an applicant for life insurance, the Medical Director should accept his application with caution, even though it is stated that he is a healthy man. But if he has the utmost confidence in the ability of the examiner, we think that he should pass the applicant on the recommendation of the examiner after he has had the party in view for several weeks and has examined him several times—never discovering any indication of anything abnormal. We will say, however, that not more than one examiner in six is entirely competent to make examinations for life insurance in every department. An examiner should not only be skilled theoretically and practically in physical diagnosis, but he should possess a microscope and know how to use it, and should be an expert in urinary analysis. In addition, he should be a man of clear, sound judgment, able to distinguish between what is physiological and what is pathological, and to give to all symptoms their due weight. But, usually, such a Medical Examiner, if, besides possessing these qualifications, he is conscientious, will be unacceptable to a general agent who wishes to have as little hindrance as possible in doing business in the city in which he is located, and consequently will soon begin to lay plans to have him supplanted by an examiner "less scientific"—more after his heart.

Dr. Lambert states that he accepted the applicant with a "physiological trace" of albumen in his urine, but that he

died in a couple of years of Bright's disease, while the applicant with a "heavy deposit," whom he rejected, continued in good health. He concluded that he "had made a bet on the wrong horse." May be he had, but what evidence does he possess that the "trace of albumen" became eventually the cause of the Bright's disease? Has he not met with men whose urine did not exhibit a "trace of albumen" in it, and who have died of Bright's disease in two years?

The Medical Examiner's usual method of testing for albumen in the urine is to pour some nitric acid in it, and if, immediately, a whitish cloud does not appear, he pronounces it free from albumen. If it assumes a milky appearance, he boils it, and if the heat does not dispel this, he considers that the white cloud is due to albumen, and he is probably correct. But all experts know that albumen does not always, by any means, respond at once to the action of nitric acid and heat. Consequently, in hundreds of instances wherein it is reported that albumen is not present, more delicate tests will show that it is. But we will resume the subject soon in another issue of the MEDICAL NEWS.

LONGVIEW LUNATIC ASYLUM.—Several months ago we announced the decease of Dr. C. A. Miller, the Superintendent of Longview Lunatic Asylum. The Directors did not fill the vacancy immediately, but it affords us pleasure now to announce that they have placed over the institution Dr. F. W. Harmon, a gentleman well qualified to fill the position.

Dr. Harmon, for a number of years previous to his decease, was Dr. Miller's first assistant physician. While associated with Dr. M., of course, he had an opportunity to become thoroughly acquainted with every department of the institution from the laundry, kitchen, gas-works, etc., to the prescribing for minds diseased. In appointing him Superintendent, there only had to be made a change in his title, for during the long disability of Dr. Miller, before he finally passed away, Dr. H. was the acting Superintendent—Superintendent *de facto*.

The Directors in conferring the superintendency upon Dr. Harmon but ratified the wishes of those who had friends in the institution under treatment. If the election of Superintendent had devolved upon them, we feel sure that they would have selected him. In making such a statement, we speak of Dr. Harmon in the highest praise that is possible;

for it implies that those who have the best opportunity of judging his worth regard him as intelligent, competent, reliable, faithful and humane. We hope, however, that he will not only labor for the welfare of the poor unfortunates whom he has in charge, but that he will use every effort to advance the knowledge of the profession in cerebral pathology. The physiology and pathology of the mind has not made much progress during the last ten or twelve years. Certainly, it has not kept pace with other departments of medicine. But that such should be the case is not surprising, for when we look into the annual reports of the superintendents of lunatic asylums, we find that their contents are of little or no interest to a scientific man. The pages are filled mostly with tables showing the nationality, ages, vocations, cause of insanity (as, disappointment in love and such causes as ignorant friends have alleged), social conditions, etc., of the inmates. And along with these are added tables showing the prices paid for potatoes, beans, etc. Dr. Harmon is a young man comparatively, and we really hope in filling his position he will distinguish himself not only as a humane man, but for the scientific work that he will do.

SEVERE HEADACHE WITH TENDENCY TO CONGESTION OF THE BRAIN.—“In cases of severe headache with tendency to congestion of the brain consequent upon ‘la grippe,’” writes Dr. W. T. Crother, of Port Crescent, Washington, “I used Peacock’s bromides very successfully, and shall continue its use, it being far more satisfactory in my hands than any other preparation in similar cases.”

IMPORTANT, IF TRUE.—Dr. Carl H. Von Klein, Dayton, Ohio, asserts in the *Indiana Medical Journal* that morphine, in amount equal to that which would be administered hypodermically, will act more promptly and its effect will persist longer, if snuffed into the nostrils, than if administered by any other method.

PEPSIN is undoubtedly one of the most valuable digestive agents of our *Materia Medica*, *provided a good article is used*. ROBINSON’S LIME JUICE AND PEPSIN we can recommend as such.

The fact that the manufacturers of this palatable preparation use the purest and best Pepsin on the American market, and that every lot made by them is carefully *tested*, before offering for sale, is a guarantee to the physician that he will certainly obtain the good results he expects from Pepsin.

THE CINCINNATI MEDICAL NEWS.

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Old Series.

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New Series.

Original Contributions. One Hundred Don'ts in Syphilis.

BY A. H. OHMANN-DUMESNIL,

Professor of Dermatology and Syphilology in the St. Louis College of
Physicians and Surgeons.

1. Don't salivate your patient.
2. Don't frighten your patient with the seriousness of syphilis.
3. Don't tell your patient that syphilis is incurable.
4. Don't send him to Hot Springs.
5. Don't permit your patients to do as they please.
6. Don't fail to impress your patient with the infectious nature of syphilis.
7. Don't permit your patient to become melancholy.
8. Don't order inunctions for a married man.
9. Don't be afraid to give your remedies in doses that are high enough.
10. Don't regard every symptom and lesion as syphilitic because the patient is.
11. Don't pronounce a case not amenable to treatment; send the case to one who knows more about the subject than you do.
12. Don't operate on syphilitic lesions under the impression that they are epitheliomata.
13. Don't inquire as to how the disease was acquired. The patient will tell you unsolicited or will lie about it.
14. Don't fail to employ local applications.
15. Don't begin general treatment as soon as the chancre appears; it might not be a chancre.
16. Don't forget that some persons have large inguinal glands, normally.
17. Don't suggest alopecia to your patient, or he will pull out half of his hair to see if it is falling out.

18. Don't fail to watch closely for iritis. This needs immediate attention when it occurs.

19. Don't forget to make syphilitics keep their teeth clean.

20. Don't use nitrate of silver on mucous patches. Use nitric acid, pure carbolic acid, creosote, or campho-phenique, according to the depth and severity of the lesion.

21. Don't let your patient neglect taking medicine.

22. Don't foretell any results. They may not occur; or some may arise which you did not foresee.

23. Don't permit smoking or drinking during the early stages of syphilis.

24. Don't neglect any detail.

25. Don't permit a syphilitic to marry until you can conscientiously do so.

26. Don't attempt to make all syphilides disappear by internal medication alone.

27. Don't hesitate to use energetic treatment when it is indicated.

28. Don't let your patient get diarrhœa. If it comes on, stop it.

29. Don't let your patient get an iodic eruption. Use bicarbonate of soda.

30. Don't excise a chancre. It is useless except for cosmetic purposes.

31. Don't order mercurials or iodides to be taken before meals.

32. Don't pronounce a case one of syphilis until you know it to be such.

33. Don't make your external applications too strong.

34. Don't fail to tone up your patient during the secondary period of incubation.

35. Don't place too much reliance upon the history furnished by your patient.

36. Don't imagine that the social standing of your patient is a guarantee of the disease not being syphilis.

37. Don't forget that tannate of mercury is indicated when gastric irritability is present.

38. Don't try every new remedy on your patient.

39. Don't forget that the mercurials and iodides are the only reliable remedies in syphilis.

40. Don't weaken your patient by excessive sweating.

41. Don't starve a syphilitic.

42. Don't abandon the iodides because they irritate the

stomach. Administer them in milk, or try other iodine preparations.

43. Don't permit a syphilitic's pregnant wife to go to full term without placing her upon specific treatment.

44. Don't forget that, as a rule, syphilis is of a milder type in women than in men.

45. Don't forget to examine the genitalia of every syphilitic woman. They are prone to moist condylomata.

46. Don't excise syphilitic condylomata. They readily yield to topical applications.

47. Don't fail to look for the chancre. It must be somewhere.

48. Don't imagine that every pharyngitis in a syphilitic is necessarily specific in character.

49. Don't permit a syphilitic to kiss others. Mucous patches may have developed within a few hours.

50. Don't forget that tertiary symptoms may come on early in the disease.

51. Don't fill your patient with mercury for tertiary lesions.

52. Don't promise to remove bony growths (exostoses, etc.), by medication.

53. Don't permit gummata to ulcerate.

54. Don't regard any syphilitic lesion as too insignificant to deserve attention. It may be of the highest importance.

55. Don't push your remedies if they are not well borne. The reason for the want of tolerance must be found and corrected.

56. Don't neglect the patient's general condition.

57. Don't forget that potassium salts are more irritating than the sodium or ammonium salts.

58. Don't lose sight of the fact that the squamous syphilides require the local treatment given in psoriasis.

59. Don't use the same dose for every patient. Each case is a law unto itself.

60. Don't use the iodides in the early stages of syphilis.

61. Don't fail to watch your patient's gums closely while you are giving mercurials.

62. Don't forget that syphilitic eruptions itch in the hairy portions of the integument.

63. Don't imagine that syphilis can be "boiled out."

64. Don't forget that chancres may suppurate.

65. Don't cauterize a chancre.

66. Don't forget that chancre may be multiple.

67. Don't think that because an eruption is mild the process will not be severe.

68. Don't suppose that syphilides are painful until they attack the deeper structures.

69. Don't forget that brain-workers are most prone to syphilis of the brain and cord.

70. Don't call a phagedenic chancroid a mixed chancre.

71. Don't cauterize a serpiginous syphilide.

72. Don't place too much reliance upon vegetable alteratives.

73. Don't cut out the inguinal ganglia. It does no good and mutilates your patient.

74. Don't expect to find every chancre indurated. In some localities the chancre never indurates.

75. Don't permit a syphilitic, who has eruptions, to use the same towel in common with others.

76. Don't let a syphilitic sleep with one who is free of the disease.

77. Don't permit the secretions of syphilides to accumulate.

78. Don't trephine for gummata of the brain.

79. Don't give the patient the "benefit of the doubt" by placing him under specific treatment. It only increases the doubt.

80. Don't fail to make facial syphilides disappear as rapidly as possible.

81. Don't call a relapsing indurated syphilide a chancre.

82. Don't give quinine in syphilitic fever.

83. Don't hesitate to dress serious lesions yourself. You will then know they receive proper attention.

84. Don't fail to give your patient a mouth-wash and gargle during mercurial treatment. It will counteract the effects of the mercury to a certain extent.

85. Don't call the pigmentation of syphilis *tinea versicolor*.

86. Don't take flea-bites or the eruption produced by the bites of other insects for the erythematous-syphilide.

87. Don't forget that a chancre may be but a slight erosion.

88. Don't take a chancre of the tonsil to be an enlarged tonsil.

89. Don't believe all the stories of mediate contagion which patients will tell you.

90. Don't forget cleanliness in the treatment of the chancre.

91. Don't administer iodide of potassium in very small doses.

92. Don't attempt to treat a case of syphilis if you can not give it your continuous attention.

93. Don't forget that iodide of potassium is best administered in milk.

94. Don't forget that syphilis attacks the nervous system very insidiously.

95. Don't permit a syphilitic nurse to suckle a healthy child, nor a healthy nurse a syphilitic child.

96. Don't always expect a child to show evidences of congenital syphilis at birth; they frequently appear later on.

97. Don't fail to watch closely the offspring of syphilitic parents.

98. Don't rely upon the dictum that syphilitic eruptions are always symmetrical.

99. Don't regard syphilitics as criminals; they are unfortunate.

100. Don't fail to point out to every syphilitic that he or she is a focus of infection, a dangerous member of the community, and enjoin the exercise of the greatest care to prevent the accidental infection of others. Against deliberate infection there is no protection.

Antagonistic Bacilli.

BY JAMES BARNSFATHER, M.D., CINCINNATI.

Antagonism is the law that governs life. Without antagonism we could not live, move, or have our being. The world is full of antagonism. All animal life is antagonistic, and a constant warfare is being carried on, from the stately monarch of the jungles down to the smallest bacillus. Monarchies antagonize each other; armies of soldiers fight for the supremacy, and even among men in the same profession or occupation you will find the most bitter antagonism and jealousy. Let us liken a man's body to a monarchy. His body, like the monarchy, has numerous foes, who would like to overpower and take possession and destroy him, but from one end of the alimentary track to the other in his system, we find many kinds of micro-organisms (whom we will call home guards), whose office evidently seems to be

the carrying on of the processes of life and digestion, and also of antagonizing the saprophytes, or death-dealing bacilli, that are constantly invading his body through the air he breathes and the food he eats. Between them there is a constant life-and-death struggle for the mastery, and while our home guards are in the supremacy we remain in good health. On the other hand, when the saprophytes are present in the system in greater numbers than usual, we have an unhealthy condition set up, in consequence of the leucomains made by them, which affect the nerve centers by absorption or otherwise, thereby producing what we call sickness. If this state of affairs is not rectified, and they are allowed to still multiply and increase in virulence, we have that condition set up which eventually causes death.

As I have just stated, I believe all the different bacilli and their leucomains found in the healthy body, antagonize the saprophytes, but as far as my investigations have gone in this direction, I give the palm to the "colonic bacillus" (or the bacillus found in the colon). This bacillus did good work for the writer sixteen years ago, when he was suffering from blood poison, caused by being cut with a scalpel while working in the abdominal cavity of a dead female, the contents of which were putrid. The bacillus I used was from the fresh fæces of a cow. Without going into details, I will state that after suffering fearful pain I was relieved of the inflammation, swelling and pain after twenty-four hours' application of the poultice. This experiment set me to investigating the action of this bacillus and its leucomains, and after numerous trials I feel safe in saying that in this bacillus I believe we have an antidote to "pyæmia," if used early enough.

I have merely thrown out these few suggestions to draw the attention of microscopists to this bacillus, in the hope that a more extended investigation will confirm my experiments; and perhaps, the time may not be far distant when it will be cultivated specially to antagonize all cases of blood poisoning.

In the Cincinnati *Enquirer* of December 29, 1889, is an account of a New York surgeon dissecting the skin off a body that had been dead three days, and laying it on a cancerous wound, and when he examined it a few days afterward he not only found the skin attached, but all traces of the cancer gone. Can this be so, or is it only another in-

stance of "antagonistic bacilli"? Patient investigations only will solve the riddle.

I have two more bacilli I have been investigating and watching for the last four years, but have not yet fully come to a conclusion in their case. When we see one disease checked by another disease, and we know that bacilli are at the bottom of those diseases, we have reasonable grounds for believing that one of the bacilli has antagonized the other. I may state that one of the bacilli is always fatal to the patient; it is the bacillus of phthisis pulmonalis, the other is the bacillus rheumaticus. From investigations made thus far, they are antagonistic; but I will give particulars later on.

NOTE.—In the article published in the CINCINNATI MEDICAL NEWS for July, 1891, on page 490, will be found the history of the case referred to in the above paragraph.

Sanitation—Its Relation to Health and Disease.

BY R. R. HOPKINS, M.D., RICHMOND, IND.

The preservation of health is an object of desire to every person, as well as the attainment of longevity. No matter in what age or country man's lot is cast, or by what arbitrary tenure he lives, these objects are the wish of the master and the slave, of the illiterate and the learned, of the timid Hindoo and the warlike Arab, of the native of New Zealand and the inhabitant of New England. An indispensable condition for the greatest and longest enjoyment of the senses and propensities, for the exercise and widest range of the intellect and gratification of the sentiments, whether these be lofty or ignoble, is health, which, in an especial degree, has ever been a fit subject of contemplation and instruction by the philosopher and legislator. Their advice and enactments in regard to the means of preserving it have frequently been enforced as a part of religious duty; and, at all times, civilization, even in its elementary forms, has been marked by laws respecting it. From the numerous and minute hygienic enactments of the great Jewish law-giver, for the guidance of the people of Israel, prompted, we may suppose, in part by the example of Moses, and also by considerations growing out of the nature of the climate in which he lived, Mohammed incorporated, with the mingled reveries, ethics and blasphemies which compose his Koran, dietetic rules and observances of regimen that are, to

this day, implicitly obeyed by his zealous followers. In such a climate as that of Arabia, Syria and the adjoining countries, can we doubt of the wisdom of that part of his code of health which prohibited the eating of the flesh of gross animals, such as that of swine, and the drinking of wine? He enjoined the practice of daily ablutions and promised future rewards to him who erected a fountain by the wayside, or otherwise secured the means for the traveler of the desert to slake his thirst with pure water. Can we contrast, with credit to ourselves, this recommendation, with the practice so common, and, until lately, so universal in nearly all Christian lands, of erecting houses by the wayside, where the traveler, even though not impelled by depraved appetite, still felt himself under obligation to drink of a liquid poison—ardent spirits—whose alcoholic fire is but imperfectly mitigated with water? The Greek and Roman legislators prized too highly the lives of the citizens of their respective states, to neglect laws for the preservation of the public health. Solon, by one of his enactments, forbade the exportation of any of the products of the soil except oil, when in excess and to be spared without endangering the supply of food for the people. There were other laws, regulating entertainments, one clause of which directed that none but mixed or diluted wines should be drank at banquets. The Areopagites were, also, required to take cognizance of all drunkards. In Sparta the education of children was managed so as to secure health and robust constitution, and temperance was made an affair of the state, with whose regulations no false tenderness was allowed to interfere. I do not mean, however, to applaud the details of the Spartan education, but merely to exhibit the importance which Lycurgus, and the government after him, attached to the health of the people. Gymnasia originated with the Lacedæmonians, but became general in all the Grecian states. In these the youth were trained, by various exercises, to secure manly vigor and endurance of the fatigues and hardships of war. The most celebrated gymnasia of Athens, the Lyceum, the Academy and Cynosarges, were severally illustrated and made memorable by the lessons of Aristotle, Plato and Antisthenes. Thus the same youth who had exercised their bodies at wrestling, running and throwing the quoit, acquired, at the same time, scope and variety of thought in listening to the illustrious teachers of philosophy and ethics. Rome, barbarous in her origin, if we can attach any credit to the

traditions which have come down to us from her earliest period, having acquired a knowledge of the Etruscan arts, gave attention to the public health, manifested, to this day, in the aqueducts and remains of immense sewers, particularly the Cloaca Maxima. The profuse supply of water afforded by the aqueducts was ample for all the wants of citizens in the way of drink, culinary and all domestic purposes, besides enabling each individual to enjoy a regular bath at a cost little more than nominal. Officers high in rank were appointed to take cognizance of all that could materially affect the public health, viz.: having an oversight of the quantity and quality of provisions, the preservation of the sewers and regulation of the public baths, etc. Health and longevity can only be attained by a close study of the sanitary laws. This remark is as applicable to communities as to individuals, to a government as to a whole people. The sanitary laws that protected the ancient nations were enacted by the great Lawgiver, who was the creator of all things in the beginning. They should be studied in all their minutiae. Water in cellars keeps the floors damp; as a result, rheumatism follows with its many sequelæ; colds, congestions, diseases of a grave type are produced. There is no hot-bed in existence that will develop micro-organisms more rapidly than damp cellars. Diphtheria has its origin from this or similar causes, for it always creates a bad air in a dwelling. The most remote parts of the building are affected by poisonous gases, the organs of excretion are involved, the skin, lungs and kidneys; and finally a pathological condition is the result. The functions of digestion, respiration, circulation and absorption suffer when digestion is retarded; assimilation is affected when any of these organs performs its office imperfectly and disease is the consequence; the complete non-performance of all causes death; the perfect performance is attended with health. Thus, then, it will be seen that the vitality and vigor of the body and all of its parts are in direct relation to the frequency with which the atoms composing the body are changed through the various processes of nutrition. In health the tissues are built up, the effete materials being eliminated, each atom fulfilling its allotted end. Life must be supported by nourishment, exercise being required to assist the great functions of the body to carry off the waste material, while air is needed to oxygenate the blood. The illustrious Sydenham wrote two hundred years ago in these words: "I know not

which is the more indispensable for the support of the animal body—food, healthy air or exercise.” Health exists when all the functions of the body are working harmoniously together and every organ of the body has its amount of blood given to it; when the circulation, by which the blood keeps pouring its confluent streams through every part, continually carries fresh fuel to sustain the vital powers. This river of life impetuously rushes through every part of the body by means of an elaborate net-work of canals, beginning at the heart and passing through the great arteries, which branch and branch like the boughs of a tree, the vessels becoming smaller as they subdivide, until they are invisible except by the aid of a microscope. These are called capillary or hair-like vessels; if hairs could be found so fine that six thousand separate ones, laid side by side, would measure an inch across, the comparison would be nearly accurate, for these vessels measure from $\frac{1}{6000}$ to $\frac{1}{2000}$ of an inch in diameter, and these are the ultimate branches of the arteries, as they are the initial branches of the veins, which, beginning thus in innumerable small branches, unite and increase in size. Blood contains the elements which compose the body; that is, the blood contains what is necessary for the nutrition of the muscles, bones, nerves, brain and all the other tissues. Besides, it carries along in its current the materials of the waste and refuse of muscle, bone, nerve, brain, etc. Thus will be seen the importance of proper food, good air, proper exercise. Food nourishes, air aerates, exercise removes from the blood that which, if retained, would be injurious to the nutrition of the body. Hence the importance of pure food. Adulteration of food in this country has become to be quite an important matter to consider. The public should be protected from these frauds, as they are dangerous to life and health. All garbage should be removed before putrefaction or disintegration has commenced. Cremation seems to be the best method yet devised for its destruction. The irrigation system of sewage disposal has steadily won favor in portions of Germany, England and in a few cities in America. We know something of all the sciences, but little in regard to ourselves. We study the size of the sun, the temperature of the moon and the weight of Saturn. We are well posted in the politics of our respective States. We spend millions to teach our children the geography and history of foreign lands. We study the habits of extinct races that gnawed bones in caves

or slept on piles in lakes. We even teach the very anatomy of the cave-men and mound-builders of antiquity, but how many dollars are spent to teach our children those laws which are so essential for their welfare? Teach first the laws of health, prevent disease, and then the student will be better able to learn the classics, and to secure a knowledge of ancient countries, as well as the sciences of to-day. Every high school and college should employ a physician, who should give instruction in the laws of health and have oversight of the health of all the students. He should see that all the surroundings of the institution are sanitary, and that those under his care overtax neither eye nor brain in study, nor heart or lungs in exercise.

The study of man offers the most interesting field for original research, as there can be no higher nor any more philanthropic investigation than of preventing disease. The names of Pasteur, Koch, Pettenhofen, Jenner and others will be warmly cherished as long as time will last.

Every college should have one endowed chair for a professorship of hygiene and sanitary science, for the students would, by their improved health and increased usefulness in after life, do more to the credit of their alma mater than thousands of dollars would accomplish spent in any other way. It has been said that general health is inconsistent with extreme servitude. Greece, with the loss of her ancient liberty and the ruin of her flourishing cities, exhibits an altered climate, which her modern renovation may again restore. Spots that were once decorated with temples and groves dedicated to Hygeia and Æsculapius, are now shunned as seats of disease. In Italy the changes have been equally melancholy: Latium, with her hundred cities, is now almost a waste, and is so thinly tenanted as barely to suffice for the imperfect cultivation of some spots of grain, the reapers of which, becoming sick in large numbers, find a refuge where many meet their death—as in the great hospital at Rome. Ostia, once a flourishing city, and the seaport of Rome, has now but a few miserable houses; and Ardea, which at one period was able to resist Rome herself and to send out colonies, has now a population of only six or seven hundred inhabitants. How changed the fate of Magna Græcia, now a part of the kingdom of Naples, to whose people Rome herself was indebted for the elements of science and of poetry! How few and melancholy the remains of the numerous cities and noble buildings that

adorned the coast of the Tyrrhæan Sea, and in which Pythagoras taught the lessons of wisdom and orators dazzled by the splendor of their eloquence; the once flourishing Pæstum, a residence of the sybarites, enriched by foreign commerce and embellished by all that art and luxury could devise, for a time, after its decay and devastation by Saracens and Normans, totally lost to the world; its discovery only presented the remains of three ruined edifices, with no sound in or around them save the dashing of the waves against the desert shore, or the rustling of lizards through the branches which intertwine their columns and cover their floors.

Selections.

Cataphoretic Treatment of Goitre by Iodine; of Chronic Orchitis; of Uterine Fibroids, Etc.*

BY HUNTER M'GUIRE, M.D., LL.D., OF RICHMOND, VA.,
Ex-President Southern Surgical and Gynæcological Society, Etc.

About six months ago, Dr. Waite, of the firm of Waite & Bartlett, of New York City, gave me a cup-shaped electrode, and demonstrated to me the fact that, by its proper use with a galvanic battery, a solution of muriate of cocaine could be driven into the skin and complete local anæsthesia produced. A small piece of absorbent cotton, or piece of blotting paper, saturated with the solution of cocaine, was put into the shallow cup of the instrument, and the electrode attached to the positive pole of the battery. The electrode was then placed upon the skin where the insensibility of anæsthesia was desired, and the sponge on the wire joined to the negative pole was placed on some convenient neighboring part. It required a current of four or five milliamperes to drive the cocaine through the skin and make the anæsthesia complete—the insensibility extending for some distance below the surface of the skin.

A day or two after the above demonstration was made to me, about January 10 of this year, a case of enlargement of the thyroid gland came into the hospital (St. Luke's). The goitre was bilateral, old, very large, hard, and seriously

*Notes used in leading a discussion before the Richmond Academy of Medicine and Surgery, July 6, 1891.

interfered with respiration. It had resisted for years the ordinary treatment of such growths. Internally, iodide of potash, iron and mercury had been faithfully tried; and, externally, at different times, iodine and biniodide of mercury frequently used. The goitre steadily grew; and, lately, its increase was so rapid that the lady, in great alarm, came to me to ask for some surgical operation. She had spasmodic attacks of palpitation of the heart; frequent spells of giddiness and vertigo, but no ocular protrusion. Instead of attempting the removal of the gland, I determined to use iodine in the cup-shaped electrode, and see what effect it would have on the growth. I put in the cup of the electrode some absorbent cotton first dipped in water and squeezed as dry as I could get it; and on this cotton I poured ten or fifteen drops of tincture of iodine. The electrode, thus prepared, was placed on the most prominent part of the goitre—the negative pole on the back of her neck. The galvanic current was then turned on until the milliamperemeter showed the strength to be six or eight. This current was kept up for ten minutes. While using it, she told me she tasted the iodine—and afterward that this metallic taste in her throat lasted for hours. When the electrode was removed, the cotton was found simply stained with the iodine, but most of the iodine had disappeared. I repeated this application of iodine and electricity every day for three weeks. Not always, but nearly every time, she said she tasted the iodine, and said that this was the most disagreeable part of the treatment. The tumor gradually grew smaller—at first quite rapidly—but afterward more slowly, getting more and more indurated as it contracted. The cardiac and cerebral symptoms disappeared completely.

This patient, after three weeks, was called home by the illness of her child, and did not come back for a month. The goitre, however, continued to decrease while she was absent. When she returned, the applications were again made daily for three weeks. The gland was reduced to about one-fifth of the size it was when the treatment was begun, and, in spite of all further use of the remedy, remained stationary. But all of the subjective symptoms were gone, and the lady left me in excellent health.

Two other cases of chronic goitre have been treated in the same way, and with the same results—the hypertrophy diminishing, rapidly at first, then more slowly, then reaching a point when it became stationary. In four cases of re-

cent hypertrophy of the thyroid gland in young women, the enlargement rapidly disappeared under the use of this measure. Iodine and electricity have, of course, been long used for goitre. How much of the good I have obtained is due to one or the other of these agents, I don't know.

Lately, in a case of pronounced exophthalmic goitre, I used this treatment with quite rapid diminution of the enlarged thyroid gland and a decided amelioration of the other symptoms. The tendency to syncope and dizziness was lessened and pulsation of the arteries diminished, but no perceptible change in the ocular protrusion resulted. The case is too recent, however, to report. In several cases of chronic inflammatory enlargements of other parts I have used this measure with very positive good. In a case of chronic orchitis, it acted promptly and decidedly.

The treatment of fibroid tumors of the uterus by electricity, after the manner of Apostoli, is used by many surgeons. No one who has tried it faithfully and patiently can have any doubt of its great value in very many cases. For several years I have used it, and with great good. Lately, when I could reach the tumor through the vagina, I have used iodine after the plan just reported, letting the current go as high as ten milliamperes only. I have obtained very positive good in this way, and without pain to the patient. Under its use the bleeding will cease, the pain disappear, and the tumor grow smaller, just as well as when the electrode is introduced into the cavity of the wound, and the current made as strong as 100° to 200° milliamperes.

I am having constructed now a small electrode to see if hypertrophy of the tonsils can not be reduced in this way. Of course, if it is valuable, it can be used in a great variety of ways and for many purposes. I have made some experiments with other medicines, but have not gone far enough to make any report. If fluid medicated agents can be sent in this way into a growth, would it not be well to try this method of treatment in cancer in its early stages?—*Virginia Med. Journal*.

A DOCTOR in Connecticut has recently been fined ten dollars for refusing to attend a boy who had been bitten by a dog. The claim was that the boy had suffered unnecessarily before he could receive medical aid; and that the delay had resulted in greater disfiguration from the scar.

Surgery.

BY GEORGE RYERSON FOWLER, M.D.,

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THE RADICAL OPERATION FOR HERNIA IN THE ANTERIOR ABDOMINAL WALL.

Vulpus (Beitrag fur Chirurgie, Bd. vii.). V. divides the cases of umbilical hernia studied into the strangulated and non-strangulated variety. Sixty cases of the former are collected from the literature upon the subject, among which are two from the Heidelberg clinic, as well as eight cases of strangulated ventral hernia not to be classed as umbilical.

The high mortality (18.3 per cent.) of the operation in these strangulated cases is not to be attributed to the operation itself; non-strangulated cases furnish invaluable statistics in the study of the subject of operative interference. Seventy-two cases of the non-strangulated class are collected, operated upon in the antiseptic period, and it is noteworthy that among these no fatal cases have occurred. This extraordinary result shows, according to V., how groundless is the fear, usually entertained by surgeons, of attacking this class of cases.

The following conclusions regarding the radical operation in these cases are arrived at: 1st. The operation is indicated as an addendum to an early herniotomy of a strangulated hernia. 2d. In cases in which, whether the hernial mass be reducible or irreducible, decided disturbances to the patient's comfort occur.

The operation itself consists of a ligature and excision of the sac and suture of the ring. A supporting bandage or truss-pad is to be subsequently worn.

PALLIATIVE OPERATIONS IN CASES OF PROSTATIC HYPERTROPHY.

E. Vignaid (Ann. des Malad. des Org. Génito-Urin., 1890, vol. viii., No. 11). So-called palpation operations in connection with the impossibility of catheterization in some instances of retention arising from this cause are discussed, as well as those in which this is possible, though difficult. In addition, the presence of violent cystitis in cases in which the cachectic life has been entered upon, and which defy all ordinary methods of treatment, is discussed in its relation to the necessity for operative interference. Palliative operative

procedures consist of puncture of the bladder, suprapubic cystotomy and the "boutonnière." According to V., it is very rarely necessary to resort to these, but they may be enunciated as follows: 1st. The instances in which catheterization is impossible, and in which it is imperative that the septic urine find prompt and free egress. 2d. In cases in which the difficulties attending the use of the catheter can not be obviated by the use of the permanent catheter. 3d. In intractable cystitis. In the two first conditions, the old boutonnière operation, or opening the urethra and drawing through.

THE TECHNIQUE OF SUTURING IN OPERATIONS UPON THE STOMACH AND INTESTINE.

H. Braun (Deutsch Med. Wochenschrift, 1891, No. 1). The author asserts that by far the greatest number of fatalities in operations upon the gastro-intestinal tract is due to the inefficiency of the means employed to prevent leakage into the peritoneal cavity. The following modification of the usual method employed by B. for the past six years is brought forward: Those portions of the digestive tract that are to be united to each other or to the abdominal wall are secured to each by a single row of sutures through their serous surfaces. The serous and muscular coverings of each portion are now incised at a slight distance from the first row of sutures, the depth of these incisions corresponding to the submucous cellular tissue. The incised portion of each loop is now made to approximate its fellow and the suturing completed. The object of the incision of the wall of the stomach or intestine is to enable the surgeon to determine the exact depth to which the needle may be passed in order, on the one hand, to avoid penetrating the lumen of the organ, and on the other hand to secure as firm a hold upon the tissues to be united as possible. In cases in which communication is to be established between two portions of the intestinal tract, or between stomach and intestine (intestinal anastomosis—gastro-enterorrhaphy), the mucous membrane is incised after placing the above-mentioned sutures in situ, and before tying the same a portion excised if necessary and a separate row of sutures placed therein.

THE VALUE OF MASSAGE IN THE TREATMENT OF FRACTURES.

O. Meyer (Review; Inaugural Dissertation, Leipzig, 1890; Centralblatt f. Chirurg., No. 14, 1891). M. discusses

the fact that only in fractures involving the joints particularly, and most markedly in patella fractures, massage is of value in promoting rapid union. He reports twenty-seven cases of the typical fracture of the radius treated by massage in Kölliker's polyclinic in Leipzig. Union followed, in recent cases, without restriction of mobility, in a surprisingly short time. Suppuration, which is usually considerably interfered with in this class of cases, was completely restored. Kölliker usually places the arm upon an ulnar splint, and applies, as early as the third day, massage in a mild form, beginning with centripetal stroking, which gradually, every second or third day, is increased to complete massage. Views of surgeons upon the value of such early application of massage are still divided.

CAMPHORATED NAPHTHOL IN SURGICAL TUBERCULOSIS.

Jules Reboul (Thèse de Paris, Centralblatt f. Chirurg., No. 14, 1891). The author brings forward a new antiseptic made by incorporating 100 parts of beta-naphthol with 200 parts of finely powdered camphor, and then carefully heating until complete melting occurs, for the treatment of tuberculosis of those parts accessible to surgical treatment. This camphorated naphthol is an oily fluid, insoluble in water, but miscible with alcohol, fats, ether and chloroform. It is decomposed by exposure to the air, the camphor evaporating and the naphthol becoming crystallized. Light decolorizes it, but it may be preserved in dark, well-stoppered bottles. It is not a true chemical combination, but is probably only a molecular union. The antiseptic qualities of the new antiseptic depend, to a great extent, upon those of the beta-naphthol. Its antiseptic qualities have been proven by means of culture, as well as by clinical experiments, by R. It has been used with good results as an irrigating fluid in joints, bony cavities, tendonous sheaths, cold abscesses in the pleural and uterine cavities; and in addition to an interstitial injection, by instillation in cases of tuberculosis of the bladder, and in the preparation of dressings and disinfection of instruments. No poisonous symptoms have been observed, although the undiluted fluid was employed.

TRAUMATIC PERFORATION OF THE STOMACH AND INTESTINE.

Paul Reclus (Bull. et Mém. de la Soc. de Chir. de Paris, T. xvi., p. 447). The author lays stress upon the opium treatment of this class of injuries, without laparotomy, and adds

five additional cases of his own to a collection of ninety-one cases gathered from the literature of the past fifteen years. Of these, seventy-five per cent. recovered. While he does not renounce laparotomy entirely in this class of cases, the following indications for its performance are laid down:

1. Cases in which the injured loop of intestine is protruding.
2. Those in which the evidences of hæmorrhage, either internal or internal and external, are present.
3. Where the percussion of the region of the liver, or the introduction of a catheter through the wound, reveals the presence of gas in the peritoneal cavity.
4. Cases in which, as, for instance, from a forcible kick of a horse, extensive laceration is believed to have occurred.
5. Cases in which, in spite of energetic medical treatment (application of ice, large doses of opium), signs of peritonitis occur.

This last indication, according to the author, admits of further discussion.

THE QUESTION OF PRIMARY RESECTION OF GANGRENOUS INTESTINE.

Krumm (*Beitrag zur klin. Chirurgie*, Bd. vii.). The results of 83 cases of strangulated hernia, in 61 of which herniotomy was found to be necessary, are given by the author, from Czerny's clinic at Heidelberg. Of these latter, 14 ended fatally (23 per cent.). Upon 15 occasions gangrene of the bowel was found to be present. In 9 of these cases the establishment of a preternatural anus was necessary: in 1, simple incision and drainage supplied; in another, excision of the gangrenous portion with lateral suturing was done, and in 4 cases primary circular resection and suturing of the bowel was performed. Four out of the 9 cases in which a preternatural anus was established died, the other 5 making a final recovery. Of the 4 cases in which resection of the bowels was performed, 3 recovered and 1 died. After a careful study of the opinions expressed by writers upon this question, and comparing these with his own views based upon the above cases, the author concludes that resection of the bowel under certain conditions is to be performed, and that the procedure is not to be considered in antagonism to that for the establishing of an artificial anus. The primary resection is indicated in cases of elastic strangulation—rarely in incarceration or fecal impaction, without symptoms of ileus; while beginning peritonitis, a condition of collapse as well as peritoneal phlegmon, point to the necessity for the operation for artificial anus. *Brooklyn Med. Journal*.

How We Treat Wounds To-day.

BY F. S. WHITE, M.D., ASSISTANT PHYSICIAN STATE LUNATIC ASYLUM.

[Read before Terrell Medical Society, June 11, 1891.]

While this is not directly in my line of work, yet I have given the subject some thought, have had some little experience and have endeavored to keep abreast with the leaders of modern surgery. Recent investigations into the etiology of pathological processes have demonstrated the fact that the greater number of the diseases to which animal life is subject, are produced by micro-organism. The brilliant results of Koch and his school have established this fact to such a degree of certainty, that it is no longer a matter of controversy with the majority of thinking and learned scientists. The different forms of bacteria—the bacilli, micrococci and spirilla—are floating in myriads in the atmosphere, disporting in drinking-water, and infesting every nook and corner of our habitations, seeking an opportunity when the army of phagocytes, which defend the portals of our life current, is off guard or disabled, to gain an entrance into the very citadel of life, and cripple or put to an end the processes which give the blush of health to the cheek of the maid, and vigor and strength to the sturdy arms of the honest yeomanry of the country. It does not become my subject for me to enter into the consideration of general diseases in any of their aspects. I am limited to the consideration of the treatment of wounds, whether inflicted by the surgeon's knife, or otherwise. Now, the grand principle, the one idea, upon which modern surgery rests, and which is kept before every surgeon in red letters, is asepsis and antisepsis. The one thing needful is to have all wounds aseptic, that is, without any septic or poisonous substance in it; without, in other words, there being present any pathogenic bacteria. This being accomplished, the next thing is to keep it so. This end is obtained by antiseptics. In all wounds in which the nutrition of the parts is not seriously impaired, there will be healing by first intention, if they are kept thoroughly aseptic. Pus can not form without the pus microbe being present. In order for healing to take place, it is not necessary that there be active inflammation, or in fact any inflammation. It is an exploded theory that healing can not take place without inflammation.

Union takes place through the medium of the white blood corpuscles, and whenever and wherever there is an injury, they are thrown out in great numbers, and fill up and surround the solution of continuity; and when no extraneous organisms are present to interfere, the process goes on rapidly to restoration. We now come to the all-important question, of when a wound is aseptic, how to keep it so, and when it is septic, how to render it aseptic. The first principle is cleanliness, and is nothing more nor less than keeping out all extraneous material that contains any pathogenic micro-organisms. The directions usually given to accomplish this are about as follows: Take, for instance, an amputation of a limb. First wash and scrub the parts thoroughly with soap and warm water. Then wash with ether to remove any oil that may remain; then wash with a solution of bichloride of mercury, of the strength of from 1 to 2,500 to 1 to 5,000. The operator and assistants should cleanse their hands by the same process. All instruments should be carefully washed and soaked in hot water, and kept during the operation, when not in use, in a solution of carbolic acid. After the amputation is completed, irrigate the stump thoroughly with a solution of bichloride of mercury, 1 to 5,000. Stop all oozing; sew up with sterilized silk; put in sterilized draining tube; sprinkle the stump with iodoform; apply over this several thicknesses of iodoform gauze, over this bichloride gauze, over this a layer of cotton and rubber tissue, put on roller bandage, and if the antiseptic precautions have been thorough, healing will take place without a drop of pus, and when the dressing is removed it can remain off. The one symptom, the danger signal which nature throws out when our antiseptic precautions have been unsuccessful, is rise of temperature. When after an operation the temperature rises to 102° or 103° , we know that there is something wrong somewhere, and it is safe to presume that the wound has become septic, and that to such an extent that it is producing systemic disturbance. The treatment under such conditions is to remove all the dressing, thoroughly cleanse and irrigate the wound again with antiseptic solutions, removing, of course, all effete and unhealthy tissue. Then re-dress with the same precautions as before, and, if successful, there will soon be a reduction of temperature. In some instances, however, the cause of the fever may be from some intercurrent source, as malaria, etc. The surgeon is to be the judge, when examining the wound,

as to whether or not it is still aseptic. If there is only a drop of pus, and the edges look red and irritated, the trouble is in the wound, and the only proper course is the one above indicated.

Some very eminent surgeons use no antiseptic solutions whatever, only using perfectly pure water. The end sought in either case is the same, and, as I said in the outset, asepsis is nothing but cleanliness. It is but little difference how this is accomplished, but, for myself, I prefer to cleanse my wound with antiseptic solution. Very brilliant results can be had by applying this principle to the treatment of abscesses. I have treated quite a number by this plan, with remarkable success. I recall one case which may be of interest: A mammary abscess had been neglected until fluctuation could be detected at two different points. I first washed the breast thoroughly with a solution of bichloride, made free incisions at points where fluctuation was present, evacuated the pus, washed out the cavities with solution of bichloride, applied over each incision a pledget of cotton saturated with the same solution. As often as this became dry, it was replaced with a moistened piece. Put on no other dressing, and in a very short time healing, without pus re-forming, resulted.

In treating abscesses of any kind, above everything else do not apply poultices, for they are the pet abomination of modern surgery, and perfect hotbeds for the growth and development of bacteria. If it is considered necessary to soften the skin and underlying tissues, to facilitate pointing, apply some warm antiseptic solution. It is the warmth and moisture that soften the skin, not the mush or bread and milk.

A word more in regard to one or two remedies, and I am done. There are a great many surgeons who oppose the use of iodoform. This I believe is largely due to its odor and association. Most people know that iodoform is a sovereign remedy in venereal sores, and they object to having it used on them for fear some of their friends will think they have been a little indiscreet, and have departed from the strict path of virtue and morality. It is not claimed for this remedy that it destroys pathogenic bacteria. It only prevents their increase, and this virtually destroys them, for it is by their multiplication and feeding on the tissues that they do harm and set up pathological processes. Sub-iodide of bismuth enjoys quite a reputation with some surgeons, as

a dressing, and I can say that on several occasions when I did not desire to have the odor of iodoform, I have used it with good results. Aristol is another antiseptic which is being used extensively, but so far I believe it is limited to the treatment of purulent troubles about the ear and nose. Carbolic acid is an old and tried antiseptic, and to it and bichloride of mercury and iodoform I pin my faith.—*Daniel's Texas Med. Journal.*

The Menopause, or Change of Life.

BY T. GAILLARD THOMAS, M.D.

Professor Thomas, in a paper published in the *Annals of Gynæcology and Pædiatry* (May number), brings out some valuable points, both for the specialist and general practitioner, pertaining to the menopause.

Dr. Thomas introduces the subject by dividing woman's life into four great periods. The first, of fourteen years, during which she is preparing for the functions of ovulation and menstruation, or the period of puberty. For the next six years she is preparing for the functions of sexual intercourse. After that for two or three years she awaits the third function, that of maternity or parturition, and finally, about the fiftieth year, she is prepared to pass into the "sere and yellow leaf of life"—the period known as menopause.

He says from fifty to seventy, which is the normal end of her pilgrimage, she undergoes a retrograde metamorphosis. The organs which have been, up to this time, maintained in a state of busy activity, now begin to retrograde, the ovaries shrivel, the fallopian tubes shrink, the uterus becomes smaller and more insignificant, and the vagina gradually contracts, unless matrimony be continued into old age and prevents such a result. These organs during this process become subject to certain diseases, of which I am going to speak to-day.

Formerly in the profession of medicine, and at the present time among the laity, a great significance is attached to the "change of life" and many affections which have nothing at all to do with it are attributed to its instrumentality.

A woman arrives at her fiftieth year and suffers from metrorrhagia; that is, she flows steadily all through the month. She consults her doctor, and he tells her that this

is the change of life. She then tells him she has a great deal of pain and a profuse watery discharge. It is nothing more than the change of life, he repeats. She goes to another physician, who does not quite agree with this diagnosis, and he discovers that she has a cancer of the cervix that is steadily progressing. Again, a woman consults her friends and her physician on account of an abnormal enlargement of the abdomen at this time of life. She is told that it means nothing. These enlargements, she is assured, come on at the time of the menopause. She goes to another physician, who does not agree with this view of the case, and examination reveals the existence of a large ovarian cyst. These conditions are not dependent on the menopause at all. The period is much less important than was formerly thought.

As the uterus undergoes atrophy, that of the cervix may be out of proportion to the atrophy that is going on in the body. As the body of the uterus contracts, the cervix contracts to a greater degree, and gradually closes, while the uterine mucous membrane is still giving forth a discharge of mucus, which any uterus is apt to do, and the cervix shuts itself up altogether and prevents the escape of this fluid. Under these circumstances the uterus in rare cases becomes distended by air, water, blood, or muco-pus. So rare are these accumulations that many are inclined to doubt the validity of physo-, hydro-, hæmata-, and pyo-metra. These diseases do occur, but during a practice of thirty-eight years I have seen but three cases in all. Collection of air in the uterus after the menopause is the result of a fermentative action in the retained fluid. A woman, at fifty years of age, has had a uterine catarrh which invaded the fallopian tubes, and the fluid secreted by the diseased mucous membrane has been pouring through the cervical canal. The secretion occurs up to the last moment before closure of the cervix; air enters the uterine cavity, and you may have, as a result of fermentation, a uterus distended by gas.

The last case of this kind that occurred to me in practice was a lady sixty years of age, under the impression that she had a cancer of the uterus. Three practitioners had concurred in the diagnosis, basing their opinions upon the following symptoms on the part of the woman. She had stopped menstruating ten years before the occurrence of her present symptoms. As she was walking about the floor one day there occurred suddenly from the vagina a gush of fluid,

of a pinkish watery character, and of a disagreeable odor. The patient felt entirely relieved from a sensation of abdominal fullness previously felt, as a result of this explosion. Since that time, every two months, she has had a similar discharge, and the physicians accordingly made a diagnosis of cancer of the endo-metrium. Upon examination of the lady's abdomen I found there a globular mass as large as the head of a young child. I at once suspected hydro-metra, and determined to test the diagnosis. I put her under an anesthetic, forced a uterine sound through the cervical canal, after first snipping the external os with a pair of scissors. I then carried a dilator through the cervical canal, and, as soon as I forced its blades apart, about ten ounces of a dirty, pinkish fluid gushed out. I next took the curette and passed it over the entire surface of the uterus, scraping it with moderate force, thinking she had hydatids of that organ. I found it free from any such condition. I next passed a glass stem through the cervical canal, and the patient was cured from that very moment.

As the vagina undergoes atrophy, a peculiar condition, that I want especially to draw your attention to to-day, takes place after the menopause, which condition is known by the name of senile vaginitis. This affection occurs both in widows and in virgins, but is not commonly found in married women, for the reason that contraction of the vaginal canal does not develop in them with as much certainty as in the two former. There are two varieties of this senile vaginitis, the one being styled the adhesion and the other the hemorrhagic. The first form results in closure of the vaginal canal, and this closure may occur throughout its entire length, wall being firmly glued to wall by an adhesive inflammation. If such a woman has been in the habit of using injections, she is alarmed by the fact that she can not introduce her finger freely into the vaginal canal.

Now, if you have not had your attention drawn to this pathological condition, let me tell you one mistake that you may make. You will conclude that there is closure or atresia of the vagina, and treat the pathological condition as you would have done had it occurred in a young girl of thirteen, who is preparing for the great functions of menstruation, sexual intercourse and parturition. What is the use of the vagina to this old woman? None whatever! The main point that I wish to insist upon in reference to such a case is to let it alone.

Let me suppose you another case: A patient, say sixty or seventy years of age, it matters not whether she be a married woman, a widow, or an unmarried woman, she has been free from anything like menstruation for ten years or more, and she suddenly has a return of her menstrual flow. Now, never believe in the return of the menstrual period after the full accomplishment of the menopause. You may find a woman stop menstruating before she is fifty, for two or three years, and then begin again. Now, after she has passed fifty years of age, and has ceased menstruating, and again begins to pass blood from the vagina, examine that woman and in ninety cases out of a hundred you will find malignant disease somewhere in the genital tract as a cause of the flow. The woman whose case I was supposing has been ten years without menstruating. Her physician makes a diagnosis of cancer and bases his treatment on that diagnosis. The woman may have nothing simulating cancer in its pathology at all; she may have a hemorrhagic vaginitis. The red corpuscles and the watery portions of the blood are poured out of the walls of this old used-up vagina, and when you make an examination you find the upper two-thirds of the canal as red as blood. As you take a sponge and pass it over the surface, you will find that the vagina is affected by a true bloody sweat. You know that the bloody sweat spoken of in the Bible is a reality. Treat this condition by separating one wall of the vagina from the other constantly by means of a glass vaginal plug, making alterative applications to the parts at times. Plug the vagina with iodoform gauze, and put the patient upon general tonics for the restoration of her blood state, and you will cure this supposed case of cancer in two or three months, and relieve thereby your patient from the prospect of an absolutely certain death.

Another diseased condition resulting from the menopause, which requires careful consideration and study, is a form of senile hysteria that develops in a woman just about the time of the change of life, at the time of the menopause, when the woman ceases to menstruate and the sexual organs are undergoing an important retrograde metamorphosis; the mind, in sympathy, is affected by senile hysteria, or melancholia, which often lasts for years.

I come now to speak of a mechanical derangement, which is, in a certain number of cases, directly dependent on this time of life. The uterus, you know, is held in position by ligaments; the vagina in no way contributes to its support.

The uterus may descend from its normal position in the pelvis into a position which is called procidentia, but which I prefer to designate as prolapse in the third degree. There is, besides direct violence, another and different cause for this trouble. The uterine ligaments are made to support a certain given weight; double that weight, treble it, and down comes the uterus out of the body, the uterine ligaments being unable to perform an excessive function. Again, there may be no pressure from above, no increased weight on the part of the uterus, and no loss of tone in the ligaments, and yet traction from below will cause the uterus to descend. After the menopause the vagina loses all of its surrounding support in the form of fat, and traction is brought to bear upon the uterus. The fatty tissues that surround the vagina are absorbed at this time, as they are elsewhere throughout the body. Now, when the fatty tissues around the vagina are absorbed, the canal itself drags upon the uterus, and as the vagina comes down it draws the uterus with it, and you will find in a woman who has passed the menopause, and who is making no undue effort, and who taxes her strength less than formerly, a prolapsed uterus.

It may have occurred to you, as I have run hastily over this subject, giving you only a bird's-eye view of it, that I was inclined to advise pathological conditions that a woman may develop. I desire especially to guard you against this error. I commenced by telling you that there were four great elements that must exist in every woman before she can present a complete picture of perfect health. The blood state must be normal, her nerve state must be good, her muscular condition strong, and her mental state well poised before she can be pronounced a sound woman, with *mens sana in corpore sano*. Let me warn you against two things: (1) Against becoming specialists too soon; and (2) against becoming specialists in opposition to common sense. A gynecologist who is always looking at disease through the vagina is a harmful and dangerous man. Specialism tends to narrow the mental vision, to limit the pathological view, to disturb the mental balance. Beware how you allow it to do so with you! These are the evils; its advantages far outbalance them, very far; and I look upon specialism in medicine, when freed from the evils which I have mentioned, as one of the great agents of its advance.

—*Medical Progress.*

Early Stage of Disease of the Spine in Children.

It is a simple matter on paper, but not always so in actual practice, to say whether a child has or has not early vertebral ostitis. Those who have seen most of spinal disease in children will be the least likely to dispute this statement. In a doubtful case the child should at once be placed flat in bed and kept flat until all equivocal symptoms have passed off. The lecturer had met with instances in which the practitioner, though suspecting the invasion of ostitis, had allowed the child to run about, because the existing symptoms were not sufficiently obvious to enable him to form a positive diagnosis. Attention was directed to two methods of examining for spinal caries which were as widely adopted as they were antiquated and unsatisfactory. The first was that of pressing upon the spinous processes from the nape of the neck downwards. The disease being in the body of the vertebræ, pressure upon the tip of the spinous process was hardly likely to give trustworthy information. Often, indeed, there was neither pain nor tenderness in the affected region. The second method is that of applying a hot sponge along the spine. Any child would be apt to wince under this test, even though its spine were healthy. On the other hand, if its spine did happen to be diseased, it would by no means follow that the hot sponge would give information of that fact.

Though there is often no local pain with spinal ostitis, there are often complaints of symmetrical peripheral pains which are too frequently ascribed to "rheumatism" by those who do not trouble to seek out their cause.

Before proceeding to examine the child, it is well to question the parents as to the complaints of aches or pains, and to notice how the child holds himself. Probably he will be standing unusually straight, with his head and shoulders somewhat thrown back in order to keep himself in a position of stable equilibrium, the center of gravity having been advanced by the collapse of the softened vertebræ. As regards pain it may probably have been complained of in the back. But very possibly there may have been no complaint of that nature, the child having suffered only from peripheral neuralgias. These distant pains are usually symmetrical, and it is strange how the very terminal filaments of the sensory nerves are those chiefly concerned in it. Thus in cervical

caries there may be pains in each side of the neck; or, the third and fourth nerves being implicated, over the pectoral regions and shoulders. The lecturer then brought in a child, directing attention to its stiff and straight pose, and to the fact that it supported itself by holding on by his mother's dress. On being questioned, the mother said that the child's constant complaint was of "headache in the chest." Inter-costal pains which were carelessly ascribed to "pleurodynia"—whatever that was—or to "rheumatism," were often the result of vertebral disease. So also with "belly-aches," pains in the hips, thighs, legs and feet; in the arms, elbows and hands.

Several naked children with various spinal affections were then brought in. Attention was called to the fact that straightness of the spine in the cervical and lumbar region was as characteristic of vertebral caries as was the angular projection which so quickly appears in the case of caries of the dorsal vertebræ.

After all, stiffness was the most important sign of early spinal disease. Two boys of about the same age were placed side by side upon the floor; one of them had dorsi lumbar disease, whilst the other had a sound spine. The latter could put his head between his knees, his back assuming a beautiful, convex sweep. The other boy could not bend down at all. Two children were then brought in whose projecting spinous processes offered strong suggestion of vertebral caries. Their backbones could, however, be freely bent and turned in every direction, and were manifestly destitute of inflammatory trouble. Their mothers said, moreover, that they had not complained of pains, and that they could run about and play with other children without showing unusual fatigue.

As regarded the treatment of the early stages of spinal disease, Mr. Owen summed up his advice in one word, REST—absolute and continuous rest. The child should be placed on a narrow horse-hair mattress with the head securely steadied between very large sand-bags, only a small, flat cushion or pillow being allowed beneath the nape of the neck. When the pains had become a matter of almost "ancient history"; when it was certain that no abscess was forming, and when, with the lapse of many months, it might be considered that all tubercular inflammation—and these cases are always tubercular—had passed away, some kind of rigid support might be employed. To substitute a plaster

of Paris or a poro-plastic splint, however, for absolute rest in the horizontal posture, was one of the commonest errors of the present time in connection with the treatment of early spinal disease.—EDWIN OWEN, F.R.C.S., in *Med. Press*.

Treatment of Seat Worms.

Success in the treatment of cases of seat-worms depends upon the prolonged and constant use of a vermifuge or some active vermicide. The worms are generally attacked by means of injections, suppositories or ointments. Of the injections, a favorite prescription is a solution of common salt in the proportion of 1 to 5. Sometimes sugar and water may be used, and an infusion of absinthium is employed by some French practitioners. Still others employ simply cold water. It is said that West and Barthez recommended astringent injections composed of the perchloride of iron and lime-water, as follows:

R_y.—Lime-water, 6 ounces
Perchloride of iron, 10 drops.—M

And also,

R_y.—Lime-water, 4 ounces
Decoction of marshmallow, 1 ounce.—M

For the same purpose Trousseau prescribed suppositories of tannin made up as follows:

R_y.—Tannic acid, 15 grains
Cocoa butter, 1 drachm.—M

Other physicians have employed injections of asafoetida, and many have found the following treatment useful:

R_y.—Alcoholic extract of senna leaves, 30 grains
Boiling water, 4 ounces

Make an infusion and sweeten with syrup of wild cherry, 4 drachms. This may be given to an infant of four or five years as a laxative, and if it does not act may be followed by from a half to one drachm of the sulphate of magnesium. After this an injection may be given composed of one ounce of powdered quassia chips to 1 pint of water, or of carbolic acid in the proportion of from $\frac{1}{2}$ to 1 drop to 4 ounces of water. An emulsion of calomel may be employed composed of calomel 3 grains and mucilage of flaxseed 4 ounces.

Guersant is said to employ sulphuretted potash $2\frac{1}{2}$

drachms, water 4 ounces; while Rossbach finds naphthaline of great service, and administers it as an injection as follows:

R_y.—Naphthaline, 15 grains
Olive oil, 1½ ounces

This quantity may be doubled or tripled in adults. Sometimes he prefers to use naphthaline from 2 to 10 grains and decoction of marshmallow 6 ounces. If the worms inhabit the lowest portion of the intestine, it may be well to follow the treatment of Cruveilhier, viz.: to employ mercurial ointment or to rub into the anus an ointment composed of calomel 8 grains and cocoa butter 1 drachm.

Trousseau is said to employ the following suppositories:

R_y.—Calomel, 1 drachm
Vaseline, 3 drachms.

When the worms inhabit the higher portions of the rectum they will probably resist all therapeutic measures unless they be attacked through the stomach. Under these circumstances it may be well to employ calomel and 'santonin, of each ½ grain, which is to be administered early in the morning in order that the calomel may act by evening. This dose is the proper one for a child of two to three years.—*Revue Generale de Clinique et de Therapeutique*.

The Operation for Intubation of the Larynx, with Report of Twenty-two Cases.

Dr. Hal Foster, in the *Kansas Medical Journal*, reaches the following conclusions as a result of a careful study:

Intubation of itself, performed with care, involves little if any danger to life. Accidents during the operation generally result from want of care.

It prevents asphyxia, and thus gives more time for the administration of remedies, and for the system ultimately to throw off the disease. It prevents laborious and rapid breathing and lessens exhaustion. It allows a free supply of air, and thus assists in the cure of the original malady. It is the supreme resource, and as the patient can not be made worse by it, do not postpone it until there is but a forlorn hope even from it.

Persistence of the original disease, delay in the performance of the operation, and neglect afterward are the causes of its failure. Operate early, very slowly, deliberately,

carefully and without hurry. It is never too late to operate even though the child has stopped breathing; if life is not extinct, insert the tubes and perform artificial respiration. I have saved several children under just such conditions. If strangulation is the main symptom, neither age, constitutional condition nor complications can furnish a contra-indication to its performance. It alleviates suffering; it mitigates all the symptoms; it obviates secondary complications; it never adds one element of danger to the original disease.

Statistics taken collectively show that nine-tenths of the cases which render the operation needful will suffocate without it. Performed early it snatches from certain death fully two-fifths of all the cases. No patient that dies after the operation would have lived if it had not been performed. When it fails to save life the relief afforded and the substitution for the most agonizing mode of death, strangulation, for one of the least, by asthenia, are sufficient to justify its performance.—*Med. and Surg. Journal.*

Translations

Spasms of the Muscles of the Neck.

From the Proceedings of the Societe Medicale des Hopitaux (Paris).

Translated from the French for the CINCINNATI MEDICAL NEWS by Dr. H. Illoway, Cincinnati, O.

DR. DU CAZAL.—Observations of functional spasms of the neck are very rare, and little or nothing is known as to the pathology of these spasms, which are designated *rotatory tic*, *convulsive tic*, *hyperkinesis of the cervical muscles*, etc. Two cases have come under my observation, the histories of which I shall now report to the Society, at the same time presenting one of the patients. The first case relates to an officer, thirty-nine years of age, without hereditary or personal antecedents. However, at twenty he presented symptoms of the tic, “*sac au dos*” (the bag on the back); he raised his shoulders brusquely and threw his head back. In later years these spasms became more frequent, especially fatigue. The mental condition of this patient is not perfect. He has, for some time already, veritable manias, irresistible impulses; he can not tolerate the least disorder; objects placed unsymmetrically, improperly—as, for exam-

ple, an unbuttoned uniform—he can not prevent himself from placing the objects properly or from buttoning up the uniform of his interlocutor. Since July, 1889, he has experienced a sort of painful lassitude in his right arm, which prevents his writing, and which is sometimes accompanied by a torticollis. Finally, in December, 1889, the spasms of the cervical muscles set in.

This is how they are constituted: At first there are clonic contractions of the sterno-mastoid muscle, causing jerky movements of the head; then a strong tonic contraction inclines the head abruptly to the right. The tic lasts for several seconds, and is reproduced soon thereafter. At the same time the left shoulder is raised by contractions of the rhomboid and trapezius muscles, accompanied by associate movements in the right arm. These spasms may occur at such brief intervals as to prevent sleep; but they cease as soon as the patient succeeds in falling asleep. The least emotion exaggerates the spasms. The patient may arrest them by the performance of certain acts, as, for example, by opening the mouth widely, by pulling out the tongue, by looking at himself in a looking-glass. Reading is impossible.

The second observation refers to an officer, forty-seven years of age, of a dry, nervous temperament, without any hereditary taint. The spasms began last November, and since then they have greatly increased in frequency and intensity. At present the patient carries his head thrown backward; every few moments spasmodic shocks draw it toward the left shoulder. The sterno-mastoids are more especially the seat of these convulsions; the trapezius is but little affected. These muscles are of ordinary volume and present the normal electrical reaction; the general condition is good; the patient presents no sensory disturbances.

What is the nature of these spasms? Duchenne, of Boulogne, held them as similar to writer's cramp, and thought they were due to over-exercise of the sterno-mastoid. Sevestre, in 1822, presented a patient to whom this theory was very applicable; but it can not be admitted here. Dr. Balled, in 1888, showed that these spasms are sometimes consecutive to a medullary hyperæsthesia, due to a vertebral arthritis, rheumatic or other. But here in our cases there is no arthritis. Taking into account the mental condition of the first patient, we might be inclined to regard his malady as a convulsive tic; but M. Charcot

has insisted upon the differences which separate the true convulsive tics from these absolutely involuntary spasms. As to the hypertrophy of the muscle affected, with atrophy of the opposed muscle, observed by Vigoroux in functional spasms, they are not constant and do not exist in the two cases here reported. Electrical treatment has had no results in these cases.

DR. BALLET: According to Duchenne, a functional center fatigue, overworked, revolts and spasms are produced. But this theory, apparently true, is absolutely incomplete. There is certainly a pathogenic theory applicable to all cases of functional spasms, excepting those due to arthritis. It is, in fact, certain that these spasms always occur in the degenerated. For writers' cramp, for example, I have always found a nervous tare in the antecedents of those so affected. It should be the same in the other spasms. The patients of M. Cazal also belong to the category of degenerated; that what he told us of the mental state of one of them should suffice to convince us. And, besides, we must not consider their spasms as of peripheral origin. The contractions are in fact not limited to the muscles innervated by the spinal. We have here a malady of central origin. Finally, there can be seen in one of M. Cazal's patients, in the one he has presented here, a particular disposition of the ear, a sort of arrest of development, which Morel, of Rouen, considers as characteristic of hereditary degeneration. The margin of the ears is defective and the lobule is adherent.

Dr. Cazal has said that certain movements suffice to arrest the spasms. I had under observation a patient with spasms of the eyelids; the spasms ceased whenever the patient played the violin. I had the idea to substitute for the palpebral spasm, a spasm, less annoying, of the left hand, by advising the patient to turn a roller in that hand. This confirms the theory of a central origin of these spasms, which can be compared to a sort of nervous discharge, which may be due now to one region, now to another.

DR. RENDUE: The patient of M. Cazal presents very extended spasms. These spasms are often limited to the sterno-mastoid. The central origin of the affection is confirmed by a therapeutic measure in vogue in England, namely, section of the spinal nerve. In an observation recently published in the *British Medical Journal* a surgeon at first divided the spinal nerve; then resected several centi-

metres of it. Three weeks later the spasms reappeared. He then divided the nerves of the splenius and of the complexus. After this the cure was definite.

DR. RAYMOND: The patients affected with spasms are, as M. Ballet has said, almost always degenerated. Dr. R. cites two cases which came under his observation, and in which a hereditary nervous influence undeniably exists.

DR. CAZAL: M. Rendue just spoke of the surgical intervention practiced in England. M. Tillaux, in France, has performed a similar operation upon a patient of M. Desnos, without any result, however.—*La Trib. Med.*

Partial Epilepsy Due to an Intercranial Angioma—Cure by Trephining.

BY M. PEAN.

The domain of our knowledge of cerebral localizations grows greater day by day, and the study of tumors which develop on the surface of the brain acquire for this reason the greatest interest. We have therefore thought it well to publish the following observations:

The patient, aged fifteen years, was affected with partial epileptic seizure, localized in the left upper limb, accompanied by spasmodic contractions of the muscles of the pharynx and a violent pain on the top of the head to the right of the median line, about the level of the antero-superior angle of the right parietal bone. Dr. Gelineau, his physician, recognized that the epilepsy was symptomatic of a tumor which compressed the motor centers. His views were shared by Drs. Charcot and Ballet. As there were no external symptoms by which the nature of the growth could be recognized, all were of the opinion that trephining was indicated to give the diagnosis the necessary precision, and, if possible, to obtain a cure. The operation was made in May, 1889, according to the rules previously set forth by us. In the course of the operation we found ourselves confronted by an angioma of the meninges communicating with the superior longitudinal sinus.

Despite its great vascularity, despite its extent, we were able to remove the tumor in its totality without loss of blood, thanks to the temporary and definitive pinching of the varicose, dilated and erectile vessels of which it was composed.

Upon this occasion we searched the literature to see if

any analogous cases had been published. We did not find one which was exactly similar, none especially which were operated. We know the extra-cranial angioma in communication with the superior longitudinal sinus, which have been described by Nelaton and his pupils, especially by Dupont; but these tumors are superficial and recognizable by touch and view, which makes their prognosis comparatively favorable. It is altogether a different thing with our patient, however. The angioma here was intra-cranial, situated in the thickness of the meninges; it could not develop without compressing the cerebral convolutions. Hence, by reason of the cerebral disturbances, which were secondary, the prognosis was a grave one. However, the gravity of these tumors will soon disappear, since it is possible to open the cranial cavity without danger and to remove the tumors which cause the functional disorders.

Without entering to-day into too many details concerning intra-cranial angioma, we will content ourselves with setting forth the following conclusions arrived at from a study of our case:

1. Just as there exists a category of extra-cranial angioma communicating across the vault of the cranium with the superior longitudinal sinus, so we have a category of intra-cranial tumors communicating likewise with the superior longitudinal sinus, but developed in the thickness of the meninges, situated entirely in the interior of the cranium.

2. These angioma belong to the variety of *simple angioma*—that is to say, that they are essentially constituted by a knot of dilated and tortuous capillaries. They have no precise limits and continue on insensibly with the neighboring vessels, situated in the thickness of the meninges. Their principal characteristic is their communicating by a large dilated vein with the superior longitudinal sinus.

3. From a clinical point of view inversely to extra-cranial angioma, which do not give rise to any physical signs, these meningeal angioma manifest themselves solely by functional cerebral disturbances, in direct relation with the locality occupied by the tumor. These functional symptoms are, more especially: (a) the pain on the spot or region injured; (b) Jacksonian epilepsy, if the tumor corresponds to a motor center. They differ from those produced by the solid tumors occupying the same points in this, that they are influenced and augmented (a) by flexion of the head and in-

clination forward ; (b) by compression of the internal jugular veins of the neck.

4. The prognosis is very grave on account of the cerebral phenomena which they occasion, and also for the reason that a rupture of one of the vessels constituting the tumor may give rise to cerebral hemorrhage, as occurred in one case not operated upon, the results of the post-mortem examination being published by Arcy Porter.

5. Trephining is justifiable for these tumors. Hemorrhage, and notably that due to the communication with the sinus, is easily arrested by temporary and definitive clamping (pinching) of the vessel.—*Le Trib. Medicale*.

On the Use of Exalgine (Methylacetanilide) in Infantile Therapeutics.

BY DR. MONCORVO,

Member Correspondent of the Academy of Medicine in Paris.

Translated for the CINCINNATI MEDICAL NEWS from the *Bulletin General de Therapeutique*, Paris, May 30, 1891, by Mon. E. A. Quetin, Juge de Paix, Tonnerre, France.

Dr. Moncorvo says in substance:

Having devoted several years to the clinical study of nearly all the agents derived from the aromatic series, in the domain of infantile therapeutics in particular, I necessarily had to examine from that standpoint the effects attributed to a new amidogen derivative from the same aromatic series: viz.: exalgine. First, let me state that the comparative inquiries I made in regard to the antipyretic and analgesic properties of antipyrine, thalline, acetanilide, phenacetine, and lastly of pyrodiene, have convinced me of the supremacy of the first of those substances. This conclusion, based upon clinical experiments carried on on a pretty large scale, is moreover corroborated by the fact that, among those agents, antipyrine has been the one best tolerated by young subjects. Up to this time I therefore believed myself in possession of an analgesic agent hardly to be surpassed, antipyrine seeming to be the unsurpassed analgesic for infancy. To be short, an interesting communication from my eminent colleague, Dr. Dujardin-Beaumetz, presented to the Academy of Sciences on the 18th of March, last year, brought to evidence the action eminently analgesic of a new amidogen product

of the aromatic series; that is, methylacetanilide or exalgine. The investigations made on that occasion by that learned observer and by his collaborator, Dr. Bardet, attracted henceforth the attention of the medical world upon that new therapeutic agent. For my part, I was at once induced to study it in relation to infantile therapeutics, and soon my distinguished friend, Dr. Bardet, had the kindness to send me a sample of exalgine, manufactured by MM. Brignonnet and Naville. I therefore proceeded without delay to examine the properties of that substance with young subjects treated in my service. It was, however, as an analgesic that exalgine was tried on them. I asked for no other result. My investigations bore on a total of twenty-one children from one year and a half to twelve years old. For all those cases, exalgine has been employed against the element pain, and I must confess it surpassed by far my expectation. Indeed, with all my little patients, its efficacy did not fail once; and it is also remarkable that, without exception, it always was perfectly tolerated. Neither could I observe among them the intoxication, obnubilation, or a sensation of buzzing in the ears which sometimes follows the use of exalgine with adults. The action of the medicament, as a rule, was not long to come; the attenuation of pain was generally noticed one hour after the administration of the remedy, and it often disappeared entirely at the end of that lapse of time.

The medicament was frequently repeated several days in succession without the least show of intolerance; thus with some ones of my little patients I definitively dispelled headaches and neuralgic pains of long standing, and that had resisted the application of various other therapeutic agents. Yet, before studying exalgine in regard to its analgesic action, I wanted to ascertain whether it possessed any hemostatic qualities, as I was already pursuing investigations with antipyrine, thalline, acetanilide and phenacetine. The results of my experiments were negative as to the hemostatic action of exalgine. (Here the Doctor gives an analysis of his various experiments.) Those facts prove that among the agents derived from the aromatic series, antipyrine and thalline are the only ones possessing a real hemostatic action well established as much through experiences in the laboratory as in clinical therapeutics. We may now relate the clinical facts in which the analgesic value of methylacetanilide has been tried, my only aim being to verify that predom-

inant property of the medicament. I chose for that purpose among my patients some young children who presented, in a positive manner, the indication of its use. Here follow the facts: (The Doctor details twenty-one observations).

Looking synthetically at the observations that have just been related in detail, we shall have the following record of cases of the affections that required the use of exalgine: Neuralgia, 1; cephalalgia (migraine), 5; otalgia, 1; odontalgia, 2; gastralgia, 2; hepatalgia, 1; pain in the side (point de côté), 1; dry pleurisy, 1; arthralgia, 2; otitis, 2; torticollis, 1; mal de pott, 1; lymphangitis and arthralgia, 1. Total, 21.

With all my little patients the medicine, without exception, succeeded. It has always acted as a powerful analgesic. Those observations have entirely convinced me of its tolerance by children, even by infants. I never had to notice the least sign of intoxication or intolerance.

At a dose apparently small, exalgine often triumphs over a most tenacious pain, its power not being always in relation with the dose. From that standpoint it has seemed to me to possess an energy superior to that of antipyrine, at least in regard to infancy.

The two principal qualities recommending the acquisition of the new analgesic agent for infantile therapeutics are its very great activity and its most thorough innocuousness.

Exalgine was administered to our little subjects, either in substance, or in solution in wine-colored water. To older children I administered it in Gorlin or Limousin wafers; with other patients the medicine was placed upon the base of the tongue, and they were made to swallow it with some draughts of wine-colored water.

In regard to the posology of that medicament, I must confess that, at the start, I felt somewhat timid; I seldom prescribed at first over five centigrams per day, but in proportion as its tolerance and innocuousness were becoming each day more manifest, I would increase progressively the doses, arriving, so, at that of thirty centigrams in twenty-four hours, and I may affirm that this last dose was as well tolerated as five centigrams.

The above considerations had just been put down in writing, when I was afforded an opportunity to try the use of exalgine as a nervine. (The Doctor relates the case of a little girl, eight years old, affected with hereditary chorea, who was promptly improved, and is still under treatment.)

Conclusions :

1. The extreme activity of methylacetanilide or exalgine as an analgesic agent has been, without exception, well demonstrated with twenty-one children from one year to twelve years old, in various cases of painful affections.

2. The medicament has been very well tolerated by all those children, without exception.

3. None of the accidents observed at times with adults (inebriation, obnubilation, buzzing in the ears, etc.) was ever present with my little patients.

4. Exalgine was tried with them first at the dose of five centigrams per day, and increasing progressively to the dose of thirty centigrams.

5. Exalgine, having a very acceptable savor, could be administered to some of my patients in substance, applied directly on the base of the tongue or in a wafer of azymous bread ; with others, it was given in wine-colored water.

6. Under the same circumstances, exalgine was proved to have an activity surpassing that of antipyrine, for, at a dose small in appearance, it acted as well as antipyrine at a dose five times higher.

7. The facts related in this communication evidently justify the introduction I am now proposing of that new analgesic agent into infantile therapeutics.

8. One first trial of the use of exalgine in the treatment of chorea seems to recommend its value also as a nervine remedy.

Russian publications.—Ten cases of chronic alcoholism successfully treated with hypodermic injections of strychnine, by V. Ergolsky (Wratch, No. 10, 1891).

The author publishes ten very interesting cases taken from his private practice in the space of one year and a half. They were chronic alcoholic brandy drinkers. The author treated his patients with hypodermic injections of nitrate of strychnine, at the dose of one to three milligrams per injection. After about ten injections, the result was remarkable ; all his patients felt a disgust for brandy.

The author concludes that, if patients are well disposed, they may be radically cured, in cases of relapse, by a series of repeated injections.

Not less than thirty-five medical societies of a more than local character will meet this summer and fall.

Proceedings of Societies.

Gynecological and Obstetrical Society of Baltimore.

Reported for the CINCINNATI MEDICAL NEWS by William S. Gardner,
M.D., Recording Secretary.

The President, Dr. Henry M. Wilson, in the chair.

Dr. Brinton read a paper entitled "A Day's Work in Obstetrics." Under this title he related the following cases:

1. A case of podalic version.
2. A case of normal labor.
3. A case of shoulder presentation.

Efforts at version unsuccessful; vagina ruptured; the woman dying undelivered.

4. A case of placenta previa lateralis treated by internal podalic version. Mother and child saved.

Dr. Miltenberger: There is some discussion in regard to the preference for high forceps and version. I prefer version, but the profession is divided, and the choice comes to a matter of skill and individual practice.

Dr. Neale: One of the points claimed for version over high forceps is that in version the narrower diameters of the head come first. It has been claimed that the same condition is brought about in the use of forceps by the diminution of the diameters of the crown, so that they are less than those of the base of the skull. I can not see how this is, for certainly the forceps do not, as a rule, compress sufficiently to reduce the diameters of the crown to less than those of the base of the head.

Repeated attempts at version have often given bad results when the uterus is contracted and retracted; and when there is a neglected cross-birth, and the child is dead. After a moderate attempt at version has failed, decapitation should be done. By means of Braun's hook it is certainly a comparatively easy and safe procedure. I have no criticisms to make upon the treatment Dr. Brinton adopted in his cases.

Dr. Brinton: Since this case of rupture of the vagina has been reported, it has been stated by a pathologist of this city that it is the only one on record. I would like to ask if any of the gentlemen present know of any such cases?

Dr. Miltenberger: There are certainly on record many cases of rupture of the vagina. I have seen at least two such cases.

Dr. Thos. A. Ashby: I once passed a sound through the uterus. The sound went in easily, and could be felt just below the umbilicus. Before this the patient had had pus running slowly from the uterus, which had evidently had its origin higher up. There were no bad symptoms. The woman rode home a distance of eight miles, and has not been heard from.

I once attempted to remove an epithelial growth from the vagina, and all at once the intestines came down. I cleaned away the diseased tissue, closed up the opening with a firm stitch, and the wound healed promptly. The patient lived eleven months.

Dr. Geo. W. Miltenberger read a paper upon "Superfoetation and Superfecundation."

Dr. P. C. Williams: I had a case recently of ovulation during lactation. A lady came to me who had continued to nurse her child, and is now five months pregnant. These cases show that there may be ovulation without menstruation, and lead me to agree with Dr. Miltenberger.

Dr. Ashby: I have had cases similar to Dr. Williams'. I have been surprised at the frequency with which menstruation returned after apparent removal of both ovaries and tubes. One of the first cases upon which I operated was one of hystero-epilepsy. I thought I had removed all the ovarian tissue, but found subsequently that I had not. She began to menstruate about eight months after the operation, and afterward suffered from metrorrhagia. Three years later I examined her under chloroform, and found a small tumor. I operated and removed a small portion of an emptied ovary. She recovered promptly, and has not menstruated. Her health is good, and there has been no return of the hystero-epilepsy. I have had other cases in which some parts of the ovaries had been left behind. These women continued to menstruate. In those cases where I have succeeded in removing the ovaries entirely, I have not observed the return of menstruations.

Dr. B. B. Browne: I attended a woman a few years ago who had had seven children, and had never menstruated. She was married before menstruation began, and had had children very frequently. I think superfoetation does occur. It certainly occurs in uterus septus.

The removal of the ovaries has little to do with the cessation of menstruation; but the tubes have much to do with it, and it is when a portion of the tube remains behind that

menstruation continues. Menorrhagia will occur when the tube is closed at the outer extremity. When a part of the ovary is left, of course a part of the tube is left also.

Dr. W. E. Masely: My experience has been such as to make me believe that menstruation does not depend upon the presence of the Fallopian tubes, nor is it independent of the ovaries. Eighteen months ago I opened a lady's abdomen for a very severe case of chronic pelvic peritonitis with double pyosalpinx. Both tubes were tied close to the uterus and removed, but after a diligent search no trace of either ovary could be found. Dr. W. H. Welch, to whom the specimens were shown, expressed the opinion that the ovaries had probably been destroyed in the inflammatory process. The patient made a good recovery after very prolonged drainage, made necessary by the sloughy condition of the pelvic contents and the fecal fistula, which persisted for several weeks. This patient for months has been menstruating regularly and freely every three weeks. In all probability some portion of ovarian tissue escaped destruction.

In another case, in which I took special pains to remove every particle of each ovary and both tubes on account of severe hemorrhage, the patient has not had a flow during the past twelve months.

Dr. Ashby: Mr. Tait has maintained the position of Dr. Browne for several years. In one case the patient had been suffering from hemorrhage of tubal origin; I removed both tubes and one ovary. The other ovary having undergone cystic degeneration, it was impossible to remove all the ovarian tissue. This patient has been cured of her metrorrhagia, but has a venereal menstruation.

Dr. Opie: It seems quite well established by post-mortem results that all cases of menstruation following oöphorectomy are not due to failure on the part of the surgeon to completely remove the ovaries. The utero-ovarian ligament, however, is sometimes very short, and the button-like section beyond the ligature, which in such cases contains ovarian stroma, may keep up a dominating influence; again, the anatomical shape of the ovaries gradually sloping off into the ligament, causes a part of the ovarian tissue to be left on the uterine side of the ligature in spite of the utmost care on the part of the operator.

The rule after child-birth seems to be that menstruation is in abeyance for a variable number of months, but cases have doubtless occurred in the experience of most obstetri-

cians when it has been uninterrupted during lactation. I have met with a number of cases when women have conceived during lactation, when there was no accompanying monthly flow. Dr. Tait thinks that during and even after the menopause, ovulation goes on though the mucous membrane is disqualified for securing a fecundated ovule. Ovulation may be going on during lactation, but the mucous lining of the uterus may not be well qualified for menstruation or fecundation.

Dr. Bush, of New York, who has a dairy farm, has been performing some interesting experiments, to find out the mode of securing the best quality of milk. He has determined that the heifer after the removal of the ovaries can be made a perpetual milker, and that the milk is of better quality than in cows subject to ovulation and impregnation.

Dr. Brinton: With reference to menstruation after the removal of the ovaries, we have the statement that one or two per cent. of women have supernumerary ovaries, and possibly the return of the menstruation is due to the presence of the third ovary.

Dr. Miltenberger: Dr. Browne laid much stress upon the fact that menstruation continued when obstructed tubes were present. Menstruation has nothing to do with the passage of the ovule along the tubes, but is due to the ematuration of the ovule. Therefore, the tube may be obstructed as much as you please, and there will be no results. Battey and Engleman have reported a number of cases of pregnancy after the ovaries were apparently removed by skillful operators. In other cases the ovaries, supposed to be removed, have been found post-mortem.

Dr. Browne: In most cases where the ovary and tubes are removed the lumen of the tube is obstructed by the ligation.

Dr. Ashby exhibited a specimen of a ruptured tubal pregnancy which he had removed from a patient seen in consultation with Dr. Arthur Williams, of Elk Ridge, Md. The patient was thirty-four years of age, and gave birth to one child ten years ago. She conceived in February of this year, and about the eighth week of gestation was seized with violent symptoms of intra-pelvic hæmatocele. Dr. Williams was called in, and, after examination, diagnosed the condition as a ruptured tubal pregnancy. I saw the patient with him the following day, and upon examination confirmed the diagnosis. The patient rallied from the shock of the

first rupture, and one week later a second rupture took place, though not followed with such violent and dangerous symptoms as in the first instance. The surroundings of the patient were so unfavorable that she was removed from her home in Anne Arundel County to the Maryland General Hospital, where the laparotomy was performed. Upon opening the abdomen her pelvis was filled with bloody serum, blood clots and evidences of general peritonitis. The omentum was in such a condition that it was found necessary to remove about three-quarters of the tissue. The patient was critically ill from the third to the fifth day from symptoms of intestinal obstruction. Her bowels were moved by administering one-grain doses of calomel every hour for twelve hours, every other method having failed. The patient has made a successful recovery.

This is the third case of tubal pregnancy I have removed by laparotomy within the past two years, all of them having recovered.

Richmond Academy of Medicine and Surgery.

JAMES N. ELLIS, M.D., REPORTER.

June 2, 1891, President Dr. Chas. M. Shields in the chair.

ANODAL DIFFUSION.

In the paper read by Dr. D. A. Kuyk, he remarked that electricity, undoubtedly, is the wonder of the age, and is yet in its infancy. The phenomena of diffusion, as produced by electricity, are exceedingly complex, and he doubts if we have sufficient warrant to use the name *anodal diffusion* exclusively. For instance, iodide of potassium, if put on the negative pole or cathode, diffuses quickly through the tissues, and we find free iodine at the anode. How can we account for the phenomena involved? When we speak of anodal diffusion, we at once specialize too much, thereby contracting the utility of the very element for which we desire universal use and applicability. He therefore suggests the name *electrical diffusion*.

The idea prevails that diffusion is obtained only by means of the galvanic or continuous current, whereas the faradic, or interrupted current, certainly has the same power, though, perhaps, not so intense; and probably, by recent

improvements and those continuously being made in the administration of Franklinic or static electricity, this change may be likewise effected. Here is a field for original investigation absolutely without limit.

As to *electro-physiology*, he said that the main obstacle to the passage of an electric current is the resistance of the substances through which it is sent. That of the skin is three hundred times as great as that of all intervening tissues. When the current has passed through any body for a short time, the resistance rapidly diminishes. This is due, it is supposed, to increased hyperæmia and succulence of tissues permeated by the current, or to the electrolytic arrangement of the molecules in the track of the current. In this respect, the galvanic exceeds in strength the faradic current. Certain chemicals facilitate the transmission of the electric current, such as salt, and perhaps iodine, iodide of potassium, etc.

Electricity, applied to a certain degree or strength, stimulates the motor nervous system, increasing its action, hastening its circulation by its action on the muscular fibers of the arteries, producing a temporary paralysis of the vaso-motor nerves, as shown by the hyperæmia. The lymphatic system is also thus stimulated to increased activity. Indeed, all the normal functions become exalted, everything seeming favorable to a rapid absorption of whatever medicament may be applied. Hence has arisen the utilization of the electric current, substituting a rapid, deep and complete absorption for the formerly slow, superficial and imperfect method.

The galvanic current is preferred because of its greater electrolytic action; the positive pole, because through it the current enters the body, though the catalytic action is greater at the negative pole. Again, acids and oxygen appear at the positive pole, and this, by the formation of readily soluble salts, may account for the diffusibility of drugs applied beneath it.

He quoted the opinion and experiences of a few authorities upon this subject. Wacksner, of Berlin, writing upon the "Effect of Electrical Induction Current upon Subcutaneous Injections," says: "It is evident that, by causing (immediately after injection) a series of strong muscular contractions and relaxations, an accelerated action of the blood-stream will ensue, and the foreign substance injected will be more rapidly absorbed and also more thoroughly. The muscular contractions are most effectually produced by

means of the induction current. The most powerful muscles, such as the *gluttei* or *latissimus dorsi*, are selected for the injection; the skin over them having been previously moistened with a warm salt solution, the positive pole is placed near the point of injection, while the negative is stroked over the puncture."

A majority of medical electricians prefer the continuous or galvanic current.

In order to present a paper of absolute value, Dr. Kuyk wrote to some prominent men in this field of medicine, and quoted some of the replies.

Dr. A. D. Rockwell writes that "It is pretty well understood that pain is often greatly alleviated by the introduction of anæsthetic remedies into the system, by means of the galvanic current; and that effusions and glandular swellings are more successfully treated when certain medicaments are used upon the electrodes, I am inclined to believe.

"Electrolysis will sometimes entirely dissipate a goitre for example, and will almost always reduce it more or less, and it becomes somewhat difficult to distinguish between the simple electrolytic action of the current and the absorptive effect of the remedy introduced into the system. A case that lately came under my observation, however, made it pretty evident to my mind that the so-called anodal diffusion might be more valuable in these cases than has been believed. The goitre to which I allude had been treated only by external applications, as the patient would not consent to the introduction of needles. The first ten applications, administered in the course of six weeks, resulted in a marked reduction in the size of the tumor; but, although the treatment was continued for three months thereafter, twenty-five additional applications being made, and with increased current strength, no further reduction took place. It then occurred to me to use iodine in connection with the positive pole, although I attempted it with little enthusiasm, since in former cases I had been disappointed in its use. The result has been exceedingly satisfactory, although a greatly decreased current strength has been used. Six milliamperes has been the limit of the strength of current essayed in connection with the iodine treatment, while without it I frequently gave as high as twenty milliamperes. It is now six months since anodal diffusion was begun, and the applications administered by this method amount to thirty-six, and there is hardly a vestige of the tumor remaining.

"In the extraction of hairs by electrolysis, I have been accustomed to utilize the anæsthetic effects of cocaine, by the method of anodal diffusion. The upper lip is very sensitive, and the loose parts underneath the chin, and especially near the median line, and the pain is often unbearable. Anodal diffusion, with cocaine, ameliorates greatly the pain of this operation.

"I have also obtained good results from its use in the treatment of neuralgia."

Dr. Henry G. Piffard, of New York, says: "A good deal of misapprehension exists as to this matter of kataphoresis, and a recent article on the subject in one of the journals, tends rather to becloud than to simplify the subject. The inferences that the reader naturally would draw from the article in question are, first, that the medicated solution should always be applied to the anode or reophore supplying the positive current; and, second, that certain salts, such as the hydrochlorate of cocaine, iodide of potassium, etc., are diffused directly into the system by means of the electric current. There is no evidence whatever on which to base these assumptions. Salts in solution are electrolysed or decomposed by the galvanic current, and acids, oxygens and alkaloids seek the positive, while alkalies and basic bodies seek the negative pole. Clinical experience agrees with theory, and shows that, if the anode be moistened with the hydrochlorate of cocaine, the physiological effects of the drug will be manifested. In this case, the hydrochloric acid remains at the rheophore, while the basic cocaine penetrates the skin, which, in this case, acts as the negative. If, however, we desire to obtain the iodine effects from the iodide of potassium, the cathode—not the anode—should be moistened with the solution.

"The possibility of cataphoresis has been denied by some, but the writer's experiments, made many years ago, satisfied him not only that many drugs could be introduced in this manner, but also that the method had little practical value. Anæsthesia by the 'anodal diffusion' of cocaine may prove a novelty to the patient, and impress him accordingly; but a few drops of the solution injected with a hypodermic syringe will answer all practical requirements in the great majority of cases."

Dr. Wm. James Morton says: "You will find in the *New York Medical Journal* of April 25, 1891, a short article by me, which may give some suggestions, and render needless

my writing now in full. I have brought out in that article several new points—viz.: 1. Anæmic cataphoresis; 2. Simple cataphoric plaster; 3. A simple and new electrode, conducting on both sides; and 4. The method of employing the medicine on both poles.

“I do not believe the term ‘anodal diffusion’ is a good one. It does not seem to me to cover the entire ground. True, there *is* anodal diffusion. But granting that, we must also grant kathodal diffusion, for the migration of the ions in all electrolytes takes place in both directions. That is why I say, in practice, put the medicine on both poles; though, if one cares to be more accurate, he could select his medicines appropriate to either pole—that is to say, in some cases. This, I think, would only be a refinement, which, in the present state of cataphoric medication, would lead to needless confusion.

“Of course, our views as to what takes place in the intrapolar region in cataphoresis and electrolysis are mainly hypothetical. At the poles themselves it is otherwise. There we know that the respective constituents of a binary compound, the ions from an electrolytic point of view, bump up, so to speak, against the faces of the electrodes, and collect there. The fluid has constituted an electrolytic circuit and necessitated electrolytic conduction; the metals of the electrodes, on the other hand, necessitate metallic conduction, and the moving elements in the fluid can not climb along a wire; therefore, they are arrested where metallic conduction begins.

“Now, since the field of action, in cataphoresis, is from metallic face to metallic face of each electrode, and the fluid which is in action is not only the part of the body included, but quite as much the particular fluid medicine on the absorbing surfaces of the electrodes, it follows that we have a compound electrolyte; and that to properly understand and apply the method we must study it, not alone and simply from the mechanical point of view of electrical osmose or cataphoresis, but also from the point of view of electrolysis and electro-synthesis.

“I can, perhaps, make my position, that the process is chemical, electrolytic, and not entirely mechanical or cataphraic, clearer by two statements quoted from Logge:

“‘1. Electrolytic conduction is invariably accompanied by chemical decomposition, and, in fact, only occurs by means of it.

“‘2. The electricity does not flow through, but with, the atoms of matter, which travel along and convey their changes something after the manner of piet balls.’

“There is one point to which I might call your attention. This is the slow rate of travel of atoms through water, under a propelling electro-motive force of one volt per linear centimetre. Hydrogen travels at the rate of 1.08 centimetre per hour; potassium, at the rate of 0.205 centimetre per hour, and so on. This would indicate that ample time should be given to get full cataphoric effects.

“I am about to make some new experiments as to the efficacy of the Franklinic interrupted current of the electrostatic machines to carry medicines through the skin. My experiments with such currents thus far have not given me noteworthy results.”

In the article referred to by Dr. Morton, he describes his method of “anæmic cataphoresis,” by which he claims to localize the effect for that part alone for which it is intended. He cuts off the blood-stream from the part to be treated by an Esmarch’s bandage or a rubber ring, or when these can not be applied, the same result is accomplished by compression with the narrow edge of a disc-shaped electrode. He uses medicated plasters in measured dosage, thus rendering special electrodes unnecessary. He finds his method especially serviceable in gouty and rheumatic joints. He quotes the case of Dr. Lewis A. Sayre, whom he has treated by this method, the swelling at his wrist-joint having been reduced one-half an inch; the pain disappeared, and considerable movement obtained where, before, there was none, and all of this accomplished within a few days. Nothing, up to this time, had done as much.

NITRO-GLYCERINE FOR NEURALGIA AND PHYSICAL DEPRESSION.

Dr. Jno. N. Upshur said that he had been sent for recently to see a woman, æt. 35, whom he found suffering from acute diarrhœa, rapidly going on to dysentery, with a neuralgic headache, insomnia, irritable stomach, and great depression. The bowels were controlled by enemata. On account of the depression and irritability of stomach, the administration of such analgesic remedies as phenacetine, antipyrine, etc., was not considered advisable; so he determined to employ and observe the effects of nitro-glycerine. One one-hundredth of a grain was given at 11.58. In three minutes its effect, as manifested by increased tension of

pulse, could be positively identified. In two minutes more, she expressed herself as greatly relieved, and experienced a desire to sleep. By ten minutes past twelve (twelve minutes since the administration of the remedy) the patient was comfortable, and the doctor left, leaving an additional dose with the husband with instructions to administer if there should be a return of the depression or headache. When seen this evening, there had been no recurrence of these distressing symptoms, and consequently no occasion for a repetition of the dose.

ERYSIPELATOUS INFLAMMATION FOLLOWING VACCINATION.

Dr. Upshur also spoke of an erysipelatos looking inflammation following vaccination (upon the leg of a girl-baby one year old) with bovine virus. This was regarded as an erythematous inflammation, as the edges were not as well defined as occurs in erysipelas; and under the application of a solution of cocaine in cherry water, disappeared from the area first involved, but extended above the knee, which became tense, shining and cedematous, and below to the foot. The local application was kept up, and bicarbonate of soda and Fowler's solution given internally, and it finally disappeared entirely.

Another child in the same family was similarly affected, the inflammation culminating in a large abscess in the opliteal space which was opened. Four other children had been vaccinated about the same time with the same virus, and none of the others experienced any untoward effects. The doctor is inclined to attribute his trouble in the cases above mentioned to some vice of family constitution.

MALARIAL GOUT DEVELOPED BY LA GRIPPE?

Still another case reported by the doctor was that of a man fifty-two years of age, who had been in good health until the latter part of January, when the speaker was called to see him. He seemed to be suffering from the group of symptoms recognized as constituting "la grippe," and improved under the usual treatment for this trouble. Upon returning from an absence of a few weeks from the city, the doctor found that the aching pains had become intensified, and assumed the characteristic of gout; and the patient was put to bed and treated accordingly. Then followed a typical malarial attack, with chills and fever every other day, intense headache and delirium. There was nothing abnor-

mal in connection with the urine, liver or lungs. The tongue was red and dry in the beginning, but is now white and dry. Appetite poor, and the patient is not seeming to improve. He is now taking five grains of salol and two of antipyrin two or three times a day, with Valentine's Meat Juice, milk and whisky. Took large doses of quinine when the malarial element seemed to predominate, without relief. Suspecting some trouble about the nerve centers at one time, he was also given a course of the hypophosphites. There is no history or other evidence upon which to base a suspicion of syphilis. The doctor thinks his patient began with an attack of grippe, complicated by intense malarial poisoning and gout, and asks for suggestions in regard to diagnosis and treatment.

Dr. J. S. Wellford thinks that the failure of the quinine to be followed by relief, excludes the question of malaria, as he considered that drug a specific in malarial troubles. He is of the opinion that the doctor has to deal with a case of obscure gouty affection, possibly involving the membranes of the brain.

EXTROVERSION OF BLADDER, CONGENITAL ABSENCE OF VAGINA AND EXTERNAL ORGANS OF GENERATION.

Dr. James N. Ellis reported a case of extroversion of the bladder, with congenital absence of the vagina and external organs of generation, that came under his observation as physician in charge of the Surgical Department of the City Dispensary. The posterior wall of the bladder was seen as a red mucous surface between the umbilicus and pubes, somewhat elliptical in outline, with two small tit-like projections near its center corresponding to the opening of the ureters from which the urine was discharging drop by drop. In the absence of anything resembling a penis or testicles, it is assumed that the child (three years old) is a female; but on account of her tender age no attempt was made to determine the existence of a uterus. The general health and nutrition of the child seem good, and she is bright, pretty and intelligent for her age. The inconvenience otherwise resulting from the constant dribbling of the urine, is obviated by the use of cloths, that are replaced when saturated. The formation of an artificial vagina for the exit of the menstrual flow will be necessary at puberty, but until then, operative interference promises but little relief.

Dr. John N. Upshur saw a case of *extroversion of the bladder* in an adult male when a student at the University of Virginia. The testicles were normal and the penis well developed, but the urethra was cleft, exposing its bare mucous membrane back to the point at which it disappeared in the scrotal tissues. His sexual instinct was unimpaired, and he frequently suffered from violent erections.

RETROFLEXION OF THE UTERUS WITH ADHESIONS—OPERATION
OR NO OPERATION?

Dr. W. W. Parker referred to a case that he had reported some time ago, in which the uterus was retroflexed and bound firmly down to the sacrum by inflammatory adhesions following child-birth. He was then considering the advisability of operative interference, but in the meantime had been giving her hot vaginal douches, with suppositories of iodine and opium, and tonics internally. Under this treatment the pain has ceased, but the womb remains immovably fixed. He now questions the advisability of, or the necessity for, an operation.

Dr. D. A. Kuyk saw a similar case successfully operated on in New York some years ago.

Dr. J. S. Wellford does not think an operation promises relief if the adhesions are the result of peri-uterine inflammation.

Dr. Jno. N. Upshur suggests that before resorting to the knife, the patient be put upon the iodide of potassium internally, and that the vaginal walls be painted every other day with Churchill's solution of iodine, and the use of hot douches and glycerine tampons daily. He cited the case of a patient whose uterus was tightly bound down as a result of cellulitis, with intense pain upon the introduction of the speculum, and a fluctuating tumor in the Douglas' cul-de-sac. He punctured the tumor, giving egress to a dark, sanguineous fluid, but no pus. Under the above treatment, with alkaline baths twice a week, the womb was finally found to be perfectly free in the pelvic cavity. She had never menstruated with regularity, but a slight flow followed a forcible dilation of the cervix, ceasing, however, when the os subsequently contracted. He then made a posterior section of the neck of the womb, and she is now comparatively well, with the exception of an obstinate amenorrhœa.—*Virginia Med. Monthly.*

Microscopy.

San Francisco Microscopical Society.

Straw from Egyptian Bricks—Organisms Alleged to Be the Cause of Tubercular Consumption.

[Reported for the CINCINNATI MEDICAL NEWS.]

Charles H. Denison exhibited a slide, showing pieces of straw taken from a brick brought from Egypt by a gentleman in Pennsylvania, and taken from its place in a building supposed to have been erected 3,500 years ago. Mr. Denison said: "That the members of the Society may better enjoy the examination of the specimen before them, I will proceed to describe the composition of bricks and the process of brickmaking, as practiced in Egypt about four thousand years ago. Turn to the fifth chapter of Exodus, and you will read: 'And Pharaoh commanded the taskmasters of the people and their officers, saying, Ye shall no more give the people straw to make brick, as heretofore; let them go and gather straw for themselves. And the taskmasters said, Go, therefore, now, and work, for there shall no straw be given you, yet ye shall deliver the tale of bricks.'

"I have not quoted the entire account given of this heavy task laid by the Egyptians upon their Hebrew slaves, because you are all so familiar with the record that your memories can supply the rest; but enough has been copied to answer my purpose in this paper. The Hebrews, it says, were scattered abroad through all the land of Egypt, to gather stubble instead of straw. The object presented to you this evening from its thickness and appearance may be reckoned as stubble, or rushes, instead of straw, and may be even older than estimated. It is of the same species of rush as grew there when the infant Moses was hid on the banks of the river, and that grows there to-day. Abundant and excellent clay for bricks was furnished by the sediment brought down by the Nile in its annual inundation. Their manufacture commenced at an early period in the history of the race, invented, no doubt, by necessity, because of the scarcity of stone for building purposes.

"The explorations and excavations of Europeans have made it manifest that two kinds of bricks were used in the buildings of the Egyptians, the best being like our own, exposed to the action of a fire in a kiln. These seem to have

been uniformly slack-baked ; they are light for their size, and are of a pale red color. Another, and an inferior kind, was baked, like the adobe brick of California, by the heat of the sun. In that country, as here, the direct rays of the sun are intense and capable of drying the clay effectively. In Egypt the clay was mixed with stubble or vegetable fiber, for the purpose of holding the material together—a practice common, also, to Assyrians and Babylonians. This fiber, or rush, still appears in the sun-dried bricks, but has been destroyed by the heat of the kiln in the case of the baked bricks, leaving behind it, however, in the clay, traces and impressions of the stalks or stems. The size and shape of the Egyptian brick resemble that of the modern American brick, the width being about half the length, and the thickness half or two-thirds of the width. Each brick baked in the kiln was formed or made in a wooden frame or mold, and inscribed with an inscription in a small square or oval depression near the center of one of the broad faces.

“The sun-dried bricks, containing straw or stubble, though they have often crumbled to dust or blended together in one solid mass, yet at other times are found to have retained their shape and original character almost unchanged, and offer a stubborn resistance to the excavator. An entire structure is sometimes found composed of the inferior or sun-dried material, but the more ordinary practice was to construct the foundation and inner walls of the building with it, and then to cover it completely with a facing of burnt brick which sometimes extended to as much as ten feet in thickness. The burnt then protected the unburnt brick from the influence of the weather. Sometimes the crude and the burnt brick were used in alternate layers, each layer being several feet in thickness, and a facing of burnt brick protected the whole. At other times the whole structure would be of sun-dried material, but in all such cases precautions were taken to secure its stability by placing at intervals of four or five feet a thick layer of reeds or rush matting between, and allowing the vegetable material to project beyond the rest of the external surface. The readers of Herodotus are familiar with this feature, which, according to him, occurred also in the massive wall whereby Babylon was surrounded. These reeds have enabled some buildings of the kind to endure to the present day. The cement of that time was also mixed with chopped straw or rushes and bitumen, which latter substance was also used to cement together the burnt brick.

"Bricks were also used to record deeds and other important documents upon, even after a more flexible material had been discovered. Moist clay was the earliest material upon which inscriptions are known to have been made. It has been found in form of both tablets and bricks. On the latter have been discovered only royal inscriptions, having reference to the building in which they were used, commonly designating its purpose, and giving the name and titles of the monarch who erected it. On one brick brought from a ruin was deciphered these words: 'The Sun-God, his Lord, has caused Uruk, the pious Chief, to build this temple, His holy place.' On the plastic tablets were engraved deeds and contracts, then the tablet was carefully baked in a kiln, and they have come down to us in as legible a condition, with the letters as clear and sharply cut, as any legend on marble, stone or metal that we possess belonging to Greek or Roman times. The Egyptians subsequently invented a kind of thick paper; but as late as the exodus of the Hebrews they used brick on which to print documents, for I myself have seen a receipt supposed to have been given by Joseph in the third year previous to the Famine, when he stored corn for the use of the people, that was upon a well-burnt brick of a beautiful bright-red color, and with the characters sharply cut and plainly to be deciphered upon it."

THE ALLEGED CAUSE OF CONSUMPTION.

Dr. G. M. Sternberg, an honorary member of the Society, exhibited a slide of the sputum of a consumptive patient stained by Ehrlich's method, and showing the bacilli discovered by Koch and believed by him to be the cause of tubercular consumption. These bacilli, although very minute, are readily seen with an amplification of 800 to 1,000 diameters, as they are deeply stained by the method used, while the ordinary bacteria also present in tuberculous sputa are quite colorless.

Dr. Sternberg stated that he had now found these bacilli in the sputa of a number of consumptive patients and had not found them in that of patients suffering from chronic bronchitis, or of healthy individuals. He is therefore able to confirm Koch to this extent, but is not yet prepared to vouch for the fact that these bacilli are the cause of this disease. He is at present engaged in repeating the inoculation experiment upon animals, by which Koch claims to es-

tablish this fact, and will report his results when these experiments are completed.

The greater part of the evening was spent in examining these specimens of bacilli prepared by Dr. Sternberg, and comparing them with bacteria from the mouths of healthy individuals. The results of Dr. Sternberg's inoculation tests will be looked for with interest.

Gleanings.

HYDRASTININ IN UTERINE HEMORRHAGE.—Dr. Edmund Falk (*Archiv f. Gyn.*) has administered the muriate of hydrastinin to twenty-eight cases of uterine hemorrhage from various causes.

In three cases of congestive dysmenorrhea with excessive flow, the results were most excellent. In one case, five days before menstruation was due, a daily hypodermic injection of about three-quarter grain (.05 grm.) was given, and at the beginning of the discharge the dose was increased to $1\frac{1}{2}$ grms. The period lasted about three and one-half days, and was absolutely painless, whereas previously they had always been very painful, and continued from six to eight days.

In another patient, who for more than twelve years had menstruated twice each month, the flow continuing with great pain from eight to twelve days, menstruation was postponed for three weeks after beginning the injections of hydrastinin.

In nine cases of hemorrhage from metritis and endometritis, the treatment was successful without exception.

Four cases in which bleeding was caused by disease of the anexa, parametritis, pyosalpinx, etc., were also promptly relieved by the treatment.

Nine cases of hemorrhage from uterine myomata were treated with success in each case.

Falk concludes from his studies that hydrastinin is a sure remedy against uterine hemorrhage; that it is of especial value in cases of congestive dysmenorrhea and in menorrhagia in virgins; that, in myomata, hydrastinin will control the hemorrhage; and that the result is less sure in bleeding from chronic metritis, and is very uncertain in cases of neurotic origin.

The author employs a ten per cent. solution of the salt in water, and usually injects half a syringeful twice weekly.

In five hundred injections there was no abscess and rarely irritation. It is important that hydrastinin, and not hydrastin, be used, as, according to Falk, the latter is a powerful cardiac depressant.

LOCAL ANESTHESIA.—Dr. A. Dobish, in *Allgemein. Mediz. Central Zeit.*, employs the following proceeding for inducing local anesthesia:

R _x —Chlorof.,	10.00
Ether,	15.00
Menthol,	1.00

M. Sig.: Apply rapidly for about one minute with a Richardson spraying apparatus.

Having produced anesthesia after this formula, Dobish has performed (1) opening of deep-seated felon; (2) evacuation of cervical gland abscess; (3) opening of dental abscess with scraping of the maxillary bone; (4) excision of epithelioma on the nasal ala; (5) removal of an atheroma from the face. The complete anesthesia lasted from two to four or six minutes, and was not only superficial but deep, in operation No. 3 extending to the bone. Recovery was uninterrupted in every case.

TREATMENT OF GOITRE.—According to the *Journal de Medecine de Paris* Auerbach has obtained an incomplete cure of goitre by the interstitial injection of osmic acid combined with massage:

R _x .—Osmic acid,	1 grain.
Distilled water,	3 drachms.

The injection of this liquid is resorted to every two days, and massage is practiced daily for fifteen minutes. Iodide of potassium was also given internally. After three weeks of this treatment the tumor diminishes very greatly in size and the subjective symptoms disappear.

LONG ISLAND COLLEGE HOSPITAL, in common with a number of others, has raised the standard of medical education. Hereafter the regular course of lectures will be six months in duration. Three courses of lectures will be required for graduation. Joshua M. Van Cott, Jr., M. D., has been appointed Professor of Histology and Pathological Anatomy, vice Frank Ferguson, M. D., who has resigned. The medical class of the present year numbered 250. There were 25,830 patients under treatment in the hospital and dispensary during the year 1890.

SEASONABLE REMEDIES.—The *Alienist and Neurologist* says that among seasonable remedies which are supplied by Parke, Davis & Co. are the following: Chloranodyne, which is an excellent antispasmodic and anodyne in diarrheal disorders, gastric troubles and intestinal colic. It combines the therapeutic virtues of morphine, cannabis indica, chloroform, capsicum, hydrocyanic acid, alcohol, glycerine and oil of peppermint. It is an improvement upon chlorodyne, a patented preparation, widely dispensed as an anodyne and antispasmodic, liquid acid phosphate, the action of which is to relieve symptoms of nervous exhaustion, depression, sleeplessness, melancholia and increase the vitality. This action is so well recognized that the acid phosphate is in considerable demand as a stimulating beverage. The ordinary dose of the liquid acid phosphate is one-half to one fluid drachm, in a glass of water, sweetened or not, according to taste. With carbonic-acid water and any suitable syrup, it forms a refreshing and agreeable beverage. Lime juice and pepsin is a grateful refrigerant and antiscorbutic. It is a prophylactic against many disorders prevalent in the summer months.

IN CASES OF ALOPECIA, resulting from some continued fever, Prof. Bartholow advised the use of the following as a hair tonic:

R	Ext. jaborandi, fl	℥ jss
	Tinct. cantharidis	℥ jss
	Glycerini	℥ j
	Ol. vaselini	℥ j

M. Sig.: Apply locally with a sponge at night.—*Ex.*

F. C. W. VOGEL, of Leipsic, a publisher, announces a new journal devoted to Neurology. Six numbers will constitute a volume, costing about fifteen marks. The editors will be Drs. Erb, Schulte, etc. It will be called the *Deutsche Zeitschrift für Nervenheilkunde*.

SEVERE HEADACHE WITH TENDENCY TO CONGESTION OF THE BRAIN.—In cases of severe headache with tendency to congestion of the brain, consequent upon La Grippe, Dr. W. T. Strother says he uses Peacock's Bromides very successfully, and shall continue its use, it being far more satisfactory in his hands than any other preparation in similar cases.

MURIATIC ACID IN MELANCHOLIA.—Dr. Wiltrout (*North-western Lancet*) calls attention to the fact that melancholia is often associated with a large amount of calcium in the urine. He notices several cases of complete cure in his private asylum at Hudson, Wis., by the administration of nitromuriatic acid, along with an occasional purgative.

FISSURED NIPPLES.—Dr. Barton C. Hirst (*Univ. Mag.*) suggests the following application :

℞ Bismuth subnitrate.

Olei ricini aa ʒ j

The nipple and adjacent skin must be carefully cleansed, and the ointment then rubbed on liberally.

FUMIGANT FOR ASTHMA.—

℞ Stramonium leaves.

Green tea aa ʒ j

Lobelia inflata ʒ iij

Add a saturated aqueous solution of potassium nitrate, dry and preserve in a well-stoppered bottle. A tablespoonful suffices for fumigation.—*La. Sem. Méd.*, April 29, 1891.

DR. A. E. SPOHN recommends the use of a ten per cent. solution of chloral in glycerine and water as a lotion in carbuncle. The part is kept constantly covered with absorbent cotton soaked in the solution, and the application relieves the pain. Internally, sulphide of calcium is administered. This treatment renders an incision unnecessary.

TREATMENT OF RHUS POISONING WITH IPECAC.—Dr. W. S. Gilmore, of Sorgho, Ky. (in *Country Doctor*), recommends the following with confidence, having used it for six years without a failure :

℞ Ipecac pulv. ʒ iij

Aquæ I pint.

M. Sig.: Apply freely to the affected part every three hours.

The heat, itching and pain are relieved as if by magic, and in the great majority of cases two or three applications are sufficient to produce a cure. The only difficulty that has been noticed is a slight cooking of the skin when the solution was too strong. That, however, is easily obviated, as the weaker solutions seems as efficient as the stronger. He thinks it is as near a specific as we have in medicine.

PEROXIDE of hydrogen has been used to sterilize milk. When mixed in the proportion of five or six tablespoonfuls

to the quart of milk, the milk will not curdle or become sour for forty-eight hours at the summer temperature. The cream from such milk is so sweet that butter can not be made from it for a considerable time.—*T. and R.*

FERMENTATION of milk occurs only in consequence of the introduction into it of micro-organisms. If the milk be received by a sterilized tube into a sterilized receptacle directly from the udder of the cow, it will not ferment nor become acid, though kept indefinitely.

ERYSIPELAS.—Dr. Koch treated numerous cases of erysipelas with the following ointment:

R _y	Creolin	. . . . .	3 j
	Iodoform	. . . . .	3 iij
	Lanolin	. . . . .	3 j

This ointment is spread as an even, smooth layer over the affected skin and its surroundings, on an area of at least two to three inches to the outside of the inflamed parts. The whole is covered by a piece of mackintosh.—*Med. and Surg. Reporter.*

Book Notices.

ORIGIN, PURPOSE AND DESTINY OF MAN; OR, PHILOSOPHY OF THE THREE ETHERS. By William Thornton. 12mo. Pp. 100. Boston: Published by the author.

We have not had time to give this work but a very cursory examination, and we will, therefore, be under the necessity to let the author himself describe the object of it. He says: "After a general survey or examination into the present tendency of scientific thought, I show what is required for the establishment of a science of medicine. I then prove the germ theory of disease to be untenable, and institute the transmission theory of disease, concluding with an argument for immortality."

The author has no confidence in any of the systems of medicine to cure disease. "Anything, in fact," he says, "which arises and passes beyond a comparatively slight ailment and merges into a grave condition, medicine as practiced to-day is unable to cope with, for the simple reason that common sense and science are not permitted to harmonize. The whole practice of medicine, as it stands to-day, is founded upon an empirical basis; in fact, if we examine minutely the

history of medicine, from Hippocrates to the present time, we find nothing that will enable us to reduce medical practice to a system or science. The need of medical reform is evident in every direction we look. Not a single organ of the body is understood thoroughly; and while this is the case, we must expect nothing but empiricism to prevail."

From the time of Jesus Christ to the present time, men have constantly arisen who have traduced the Christian religion and proposed new theories of religion and morals, which they have assured the world were much superior to those of Jesus'; but one after another of these discoverers have disappeared from sight, their dogmas vanishing with them, while the religion of Christ still prevails, every century finding its adherents greatly increased in numbers and extending over a wider area of the earth's surface. In the same manner, for many years, long before the memory of any one living, medical reformers have arisen who have denounced the profession of medicine, charging the members with being quacks, killing their patients with poisons, etc.; at the same time each reformer has assured the world that he has succeeded in making a wonderful discovery in medicine by which the *opprobrium medicinæ* will be forever removed; by which consumption, cancer, etc., can be cured in a jiffy. But, alas! these reformers' "triumphs" have lasted but a short time; for both they and their cures in every instance have soon disappeared; and to-day the same old profession of medicine continues trudging on, every year making progress in the regular way by new discoveries, increasing its usefulness greatly, and gaining every year more and more the confidence of the people.

STORIES OF A COUNTRY DOCTOR. By Willis P. King, M.D., First Vice-president of American Medical Association; ex-President of the Missouri State Medical Association; formerly Lecturer on Diseases of Women in the Medical Department of the Missouri State University; and Professor of Diseases of Women in the Medical Department University of Kansas City, etc. With Illustrations by T. A. Fitzgerald. Philadelphia: Hummel & Parmele, 612 Drexel Building. Price, \$1.00.

This is an "amusin'" book, as Artemus Ward would have said. The author says that he found a niche—"a long-felt want"—which has never been filled by any writer, and so he occupied it.

The author also states that an object he had in writing the book was to go down to history with that noble army of the world's benefactors—the book writers; as a man who had written a book.

Well, our readers will say, what about the book? In reply, we will state that the book is amusing, instructive, improving, exhilarating, stimulating, tonic, etc. Its pages are not filled with silly stories—too silly to be laughable—as is the case with many books which their writers profess that they prepared in order to amuse, but there are related in it many true, laughable adventures which illustrate the lives of unsophisticated backwoods people. The author is an intelligent physician, who located among the pioneers of Missouri, and he gives an account in this volume of his experience with those people.

There is described in the work what the pioneers considered as constituting an education, with a description of their schools. Then follows a description of old-time dances and parties; civilization and pioneer weddings; peculiarities of pioneer people; superstitions, traditions and foolish ideas; the ups and downs in early practice; death-bed repentance and confessions; liars and their lies; the branch-water man; preachers, doctors, midwives and nurses, etc.

The book is illustrated by many ludicrous cuts. Many of the stories are exceedingly funny, and will provoke a hearty laugh from the “bluest” and most “down-hearted” person. It will be found to be an excellent text-book for the study of human nature among the uncultured, uncouth pioneers of a new country. All the adventures and incidents related were actual occurrences.

Editorial.

DECEASE OF DR. J. J. QUINN.—In a morning paper occurred the following announcement: “Died—Tuesday, August 11th, at Fayetteville, Brown County, O., Dr. J. J. Quinn, aged sixty-nine years.”

The above simple announcement in an obscure part of a morning paper, which accidentally came under our eye, is the source of information we have of the decease of a physician who, for many years, was one of the leading physicians of Cincinnati and one of the most prominent men

of the community. Though he did not, like Koch, Brown-Sequard, and many others, with the microscope, test-tube, and by vivisections, etc., carry on investigations for the purpose of making new discoveries in physiology, pathology, and for the purpose of developing cures for diseases that have heretofore baffled the skill of medical men in treating them, yet no physician had a higher reputation for the skillful use of such remedies as are acknowledged to be efficient in meeting the indications observed in diseases when combating with them.

Though Dr. Quinn was not a prolific contributor to the medical journals, yet articles by him were not unfrequently met with in medical periodicals. These always exhibited literary ability by the style in which they were written, as well as displaying on his part a thorough knowledge of the subjects he undertook to discuss. His contributions, too, always gave the impression that he possessed a logical and well-disciplined mind. He very frequently took part in the discussions of the medical societies of which he was a member, and was always regarded as a ready and intelligent debater. He had a good command of language, and he spoke extemporaneously with fluency. When a subject of considerable interest would be up for discussion, on which the debaters differed widely in their opinions, holding quite opposite views, he would become warmed up in speaking, and display oratorical powers that would have been creditable to professional speakers.

During the early years of his life, Dr. Quinn took an active part in politics, being a zealous Democrat. He never held a municipal, county or State office, nor do we remember of his ever having been a candidate for an official position. He labored, however, for the election to office of others, and his labors were always esteemed most valuable. He was always given the most important positions upon executive committees in consequence of the value placed upon his opinions and advice.

For several years Dr. Quinn was superintendent of the Hamilton County Lunatic Asylum, when it was located at Lick Run, previous to its removal to near Carthage, when, on going into the new building, it was called Longview. The unsuitable buildings at Lick Run, and other unfavorable circumstances, afforded no opportunity for the display of much ability in the management of a hospital for the insane or the treatment of mental disease, but we have no doubt, from

our knowledge of Dr. Quinn, if he had been placed over a well-appointed institution for the treatment of the insane, he would have soon held a high position among the alienists of this country. He always seemed to us to possess a type of mind that well fitted him for the study of mental phenomena, normal and abnormal; and, consequently, if the circumstances had been favorable for him to make a special study of insanity, he would have acquired, we believe, a profound knowledge of it.

For two years Dr. Quinn was Health Officer in Cincinnati. We have no fear of being charged with exaggeration by stating that Cincinnati has never had a better health officer than Dr. Quinn. He administered the duties of the office intelligently and faithfully.

Some ten or twelve years ago, or longer, in consequence of impaired health, Dr. Quinn removed from Cincinnati to Brown County, where he owned property, and has resided there ever since. He was an active practitioner of medicine, and held a high position as such in the Queen City, when Drs. L. M. Lawson, Mendenhall, Jesse Judkins, Fries, Dodge, Baker, and others were in their zenith as physicians. After he ceased to be Health Officer he retired from practice and dropped out of notice. The younger men who now make up the profession of Cincinnati did not know him. The fate of all is that when their activity is at an end they almost immediately become lost sight of, and in a few years it becomes forgotten that they ever existed. We could mention physicians of this city who, thirty years ago, were regarded among the most prominent and best known, but to-day it is probable that not more than eight or ten out of the six or seven hundred doctors who are now practicing medicine here know that they had an existence. In a few years these few will pass away together with the relatives of the deceased, and then there will be no trace that they ever lived unless they should have performed deeds worthy to be recorded in history.

Though Dr. Quinn retired from active life a number of years ago, yet many will be saddened by hearing of his decease. A man possessing the many positive traits of character that he did would necessarily have not a few enemies, yet we believe the number is few who will not be willing to testify that he possessed many admirable qualities of mind and heart, and during the years of his active life did much good. *Requiescat in pace.*

MEDICAL EDUCATION in Mexico is on a higher level than in this country. Mexico has nine medical schools, and the course of study in each is six years. It takes but two years and a very little study to become a doctor in some of the States of the United States, but this stain upon the profession, we hope, will not continue long. Rays of light are beginning to be seen in the distance. But the rays do not emanate from medical colleges, but from organizations outside of them, as boards of health, etc.

UNITED STATES MEDICAL PRACTITIONERS' PROTECTIVE ALLIANCE.—The first annual meeting of the United States Medical Practitioners' Protective Alliance was held at Baltimore, June 11th and 12th. The order was incorporated under the laws of Maryland. Officers for the ensuing year were elected as follows: President, Dr. W. H. Crim, Baltimore, Md.; Vice-president, Dr. W. V. Wilson, New Haven, Conn.; Secretary, Dr. J. F. Davison, Glendola, N. J.; Treasurer, Dr. R. B. Elderdice, McKnightstown, Pa.

As usual in meetings for organization, comparatively little work could be done outside the regular routine. An address, setting forth the objects and aims of the society, and dealing with methods whereby physicians might the better enjoy the fruits of their labors, was read by the founder, Dr. J. H. DeWolf. Several other papers on Alliance work in general were also read and discussed. Sixteen States were represented; and altogether the meeting was considered a highly successful one. The proceedings will be published in a few weeks.

AMERICAN ORTHOPEDIC ASSOCIATION.—The fifth annual meeting of this organization will be held in the new reception-room of the Arlington Hotel, Washington, D. C., September 22, 23, 24 and 25, 1891.

We have received a programme of each day's proceedings, and also a catalogue of the papers to be read upon each day of the session of the Association. We would be glad to give the title of each paper to be read, but they are so very numerous that we have not the space to spare.

We will mention a very few of them, with the names of the authors: "Uniform Nomenclature in Orthopedic Surgery," by Dr. W. R. Townsend; "A Case of Spina Bifida

with Partial Motor and Sensory Paralysis, Double Equinovarus and Purulent Bursitis," by Dr. Augustus Wilson; "A Case of Club-foot, Club-hand, and Multiple Joint Deformity," by Dr. Wm. E. Wirt; "On the Tests of Recovery from Joint Disease," by Mr. Robert Jones, Liverpool; "Congenital Displacement of the Hip, with New Apparatus for its Treatment," by Dr. A. M. Phelps; "A Study of Atrophies," by Dr. Roswell Park; "Syphilitic Pott's Disease in Children," by Dr. T. Halsted Myers; "The Evacuation of Spinal Abscesses without Drainage," by Mr. G. A. Wright, England; "The Value of Mechanical Treatment in Old and Neglected Cases of Pott's Disease," by Dr. Henry Ling Taylor; "Malignant Disease of the Vertebræ Simulating Pott's Disease," by Dr. A. B. Judson; "Proposed Treatment of Pott's Disease by Wiring the Vertebral Processes," by Dr. B. E. Hadra; "The Prevention of Unnecessary Deformity in Pott's Disease," by Dr. Royal Whitman; "Comparative Value of the Present Modes of Treatment of Caries of the Spine," by Dr. E. H. Bradford, etc. We have given scarcely a fourth of the titles of the papers recorded in the catalogue, all of which are expected to be read during the four days of the session of the Association.

THE MISSISSIPPI VALLEY MEDICAL ASSOCIATION meets at St. Louis, Mo., October 14th, 15th and 16th. The President, Dr. C. H. Hughes, of St. Louis, writes us that "a good and profitable time is expected." There will be held at the same time a meeting and conference of the "*Medical Press Association*."

We learn from the St. Louis medical journals, and from other sources, that a large attendance of physicians from throughout the Mississippi Valley is expected. Preparations are being made to give every one a cordial reception and make the attendance upon the Association most enjoyable and highly profitable. We recommend all of our professional brethren to be on hand.

That our medical friends may know the qualifications for membership, we copy the third article of the Constitution:

"Membership in this Association shall be limited to those members of the profession of medicine who acknowledge allegiance to the American Medical Association by signing its Code of Ethics. No individual who shall be under sentence of expulsion, suspension, or disability from any recognized State, county, district, or local medical society shall

be eligible for membership in this Association until said disability shall have been removed. All applications for membership shall be referred to the Committee on Credentials. The annual dues shall be three dollars (\$3.00), paid in advance."

All questions in regard to eligibility for membership are determined by the Committee on Credentials.

GENIUSES.—A "genius" inspired Cardan with his works (theology), and inspired Tartini with his "Sonata," and Mahomet with his "Koran." Van Helmont had a "genius" influence him in all the most important actions of his life. He once saw his own soul as a resplendent crystal. Blake retired to the seashore to converse with Moses, Homer, Virgil and Milton, whom he imagined he had known before. When asked what they were like, he replied that they were majestic, gray, yet shining, and taller than man. Socrates was advised in all his actions by a "genius," whom he valued more than ten thousand masters, and frequently announced to this friends his intention to follow its advice. The glowing, animated style of great writers, the vraisemblance with which they describe bizarre fantasies like the Laputan Academy and Tartarus, demonstrate that they see and touch with the certainty of hallucinations, what they describe, and inspiration is evoked similarly to insanity. It must be said for some geniuses like Luther, Mahomet, Savaronola, Molinos and Tae-ping, that this false interpretation of inspiration gives their teachings a tinge of truth which produce conviction and gives them power over the populace. When gaiety and inspiration turn to depression these great unfortunates misinterpret differently. They are poisoned like Cardan; condemned to eternal flames like Halder and Ampere; persecuted by enemies, like Newton, Swift, Barthez, Cardan and Rousseau—religious doubt in all mounts uppermost as a crime, and becomes an active, real origin for new misfortunes. These men are so different from the common stamp that they tinge any psychosis from which they may suffer, with special characters, thus constituting a new psychosis—the insanity of genius.—*Alienist and Neurologist*, July, 1891.

HARVEY.—The drug journal of Meyer Brothers, of St. Louis, has a sketch of the life of the great Harvey, taken from the *Brooklyn Medical Journal*. We quote a few facts

in the history of the distinguished doctor which we think will be interesting to the readers of the *MEDICAL NEWS*.

Harvey, who is now almost universally accredited with the honor of having first intelligently described the complete circulation of the blood, was of a very respectable Kentish family, and born at Folkestone, April 2, 1578.

From a grammar school at Canterbury he went, at the age of fourteen, to Caius College, Cambridge, and at nineteen he took the degree of A.B., and quitted the university. Thence he went to the University of Padua to complete his medical education, under such masters as Jerome Fabricius and the other great luminaries of that, at that time, celebrated school. It was there, as a student of their discoverer, that he had demonstrated to him the valves in the veins, and his mind was directed to discovering their purpose.

Returning to England, he received a second doctor's degree from the University of Cambridge, married a daughter of Dr. Launcelot Browne, who had been a physician to Queen Elizabeth, and settled in London, where he soon became physician to St. Bartholomew's Hospital and lecturer on anatomy and surgery, and it was in these lectures that he worked out and demonstrated his great discovery of the circulation of the blood, though it was not until 1628 that he published his modest book, "*De Motu Cordis et Sanguinis in Animalibus*," at Frankfort-on-the-Main.

He was successively physician to James I. and Charles II., and it was while accompanying the latter monarch on one of his expeditions that his house in London was plundered, and a part of the manuscript of his other great work, "*On the Generation of Animals*," was destroyed. This loss he most pathetically lamented for many years.

He died on June 3, 1657, leaving all his property to the College of Physicians, for which he had previously erected a building, and to which he had the previous year presented the deeds of his paternal estate.

The private character of this great man appears to have been in every respect worthy of his public reputation. Cheerful, candid and upright, he lived on terms of great harmony with his friends and brethren, and exhibited no spirit of rivalry or hostility in his career.

He spoke modestly of his own merits, and generally treated his controversial antagonists with temperate and civil language, often very different from their own. He wrote

in a remarkably perspicuous Latin style, which is flowing and even eloquent.

Aubrey says of him: "He was not tall, but of the lowest stature, round-faced, little eie-round, very black, full of spirit; his haire was black as a raven, but quite white twenty years before he dyed."

He rode on horseback with a foot-cloth to visit his patients, his man following on foot, as the fashion was then.

His method of curing the gout, from which he was a sufferer, was peculiar: "When he had the gout he would sit with his legs bare (even in frosty weather) on the leads of Cockaine-house (his residence). He would put them in a pail of cold water until he was almost dead with cold, then betake himself to his stove, and so it was done."

His portrait is the frontispiece to the elegant quarto edition of his works issued by the College of Physicians in 1766.

TRI-STATE MEDICAL ASSOCIATION.—The third annual meeting of the Tri-State Medical Association will convene in Turner Hall, Chattanooga, Tenn., Tuesday, October 27, 1891, and continue in session three days. Indications are that it will be one of the largest medical meetings ever held in the South. Representative physicians from all sections will be present.

All who desire to read papers should send title to the secretary of the Association before September 1st. In due time a circular will be issued giving a complete list of all papers and names of exhibitors who apply for space before October 1st. Secretary of Executive Committee, W. L. Gahagan, P. O. Box 542, Chattanooga, Tenn.

THE NATIONAL EDITORIAL ASSOCIATION.—We received a very cordial invitation to attend the seventh annual meeting of the National Editorial Association, which met this year at St. Paul, Minn., but circumstances, to our great regret, prevented our being present. We understand that the sessions, which lasted for several days, were most enjoyable and made every one feel glad that he was there.

Capt. E. R. Monfort, one of the editors of the *Herald and Presbyterian*, of Cincinnati, while on his way to attend the Association, stopped at Chicago and examined the site of the coming Columbian Exposition. He was greatly enthused

by what he saw. He expresses himself as follows: "An examination of the grounds being laid out and the plans of the buildings to be erected convinces us that when the work is complete there will be grouped about a grand court the noblest achievement of architectural splendor. The gilded domes, colossal pillars and harmonious proportions of the mammoth piles will make these buildings the chief attraction of the great exhibit. This will be the more manifest when we remember that twelve millions will be expended in this way. The grounds to be occupied embrace Jackson Park, Washington Park and Midway Plaisance, with a lake frontage of two miles, and containing 1,037 acres, upon which has been spent four million dollars, and one million dollars more will be spent by the Exposition commissioners. The appropriation of the Government is one and one-half million dollars; that of foreign nations, eight millions; that of Chicago, over eight millions; and the different States will reach nearly seven millions more. With such an exhibit of the financial interest taken in the success of the great enterprise, we begin to realize that America is to have the greatest exposition that the world has ever seen. Not only will there be an effort to make it such as a whole, but in each particular detail. The Proctor steel tower will lift its head 1,150 feet, nearly one hundred and fifty feet higher than the Eiffel tower in Paris."

After "doing" Chicago and the Columbian Exposition buildings, the editors were taken in charge by the agents of the Chicago and Northwestern Railroad, who well know, as the Captain says, "that a drop of ink makes a million think," and were taken to the depot of that company. Over eight hundred men, women and children at that point were placed in twelve Pullman cars, and the train started for Milwaukee. Stopping there for a short time, the consumers of ink continued their journey "through a most lovely country, full of enchanting landscapes, enlivened by rivers, lakes and forests until they reached Waukesha, 'the Mecca of the invalid.' Hundreds of carriages of every known style and design were waiting to carry the travelers through the groves and parks that shade the springs that have made the place famous."

Again the jolly editors, with wives, children and sweethearts, sped on their way until they reached Madison. This city, we are assured, "combines all the rural freshness and beauty of the country with the commercial, social and

educational advantages of the city." The moulders of public opinion, at the capital of Wisconsin, were immediately made the guests of the city. In return for the courtesy, the grateful Captain thus speaks of the city: "It is a beautiful city, sitting in surpassing loveliness, like a royal queen of beauty on a throne, in the midst of her jewels, four beautiful lakes — Monona, Mendota, Kegonsa and Waubesa. Poets and painters have given their best talents to mirror these limpid lakes." Governor and ex-Governors, the Mayor and city fathers welcomed the Association in eloquent speeches.

When St. Paul was reached the gates were found to be opened wide to welcome the representatives of the press. The editorial badge was a passport to every proper place. It seems that wines and other intoxicants were not dispensed at any of the receptions or entertainments, which fact, we are told, all seemed to approve. Why there should have been an absence of liquors it is not stated. It may have been because the good people of St. Paul were afraid that if the wine-cup flowed freely the editors might become inebriated and "paint the town red." It may be, however, that St. Paul is a prohibition city, and consequently there were no alcoholic beverages on hand with which to stimulate the wielders of the pen, which is mighty to build up or tear down. Politicians usually ply those editors with "treats" whose favor they wish to gain. The Captain assures us, with apparently a great deal of pleasure, that among the delegates coming from every quarter of the land and representing every shade of opinion, political and religious, not one case of excessive drink was observable to disgrace the gathering. "It was exceedingly gratifying that among these moulders of public opinion there was such a marked evidence of present dignity, morality and manliness among the members."

When the Association met, the members proceeded to the discussion of their legitimate business. President Stephens struck the key-note when he said the primary object of the Association was to promote education rather than legislation or profit, and the work done and the papers read clearly demonstrated that there is a growing desire with the secular press to correct abuses in the production of reading-matter for the millions who get their education from the press. Sensation will attract, and sell papers, because of the vicious and depraved taste of a large proportion of readers. For

this the press is acknowledged to be responsible in the past. Many successful editors were troubled by the extent to which the press had pandered to this taste, and were anxious to consider ways and means of bringing about a change that would lift up the press to a higher conception of duty, make it the true educator of the people and the champion of a better civilization. In all the discussions there was a prompt response by the body to every expression, sentiment or suggestion in the direction of purifying and ennobling the press and making it a moral power in the development of society. Mr. A. H. Seigfried, of New York, closed an admirable criticism of the business management of the press with an appeal for business morals. He urged that the editor and business manager should be independent of each other. The manager is constantly making concessions, the editor should never be under such influence. Four thousand millions of newspapers are issued each year. The power of this tremendous output is but dimly realized in its vast aggregate; a force expansive, aggressive, persuasive; going everywhere, stopping nowhere.

The editors visited on one day by rail, Fort Snelling and Minnehaha Falls; on another day, White Bear Lake. By steamboat the party were taken to Lake Minnetonka, etc. At the adjournment, transportation was provided for all who desired to see more of the Northwest. About two hundred went to Duluth, 140 to the Yellowstone Park, and quite a number to the Pacific Coast.

We must mention that several hundred members of the Association visited Minneapolis, the Flour City, the "Metropolis of the Northwest," and were highly entertained by the citizens of that place, destined to be the "third city of the United States." Here are some of the statistics of that great city: The growth of Minneapolis in ten years has been 358 per cent.; the volume of jobbing business, in 1890, exceeded \$250,000,000; bank clearings, \$350,000,000; it has upwards of one thousand manufactories; 400,000,000 feet of lumber were cut in 1890-91, worth \$600,000,000; it manufactures more lumber and flour than any other city in the world.

From what is said about the health of Minneapolis we fear that it is a poor place for doctors. We advise physicians to stay away, for it is said that no one gets sick there.

All stay-at-homes wish they had been at the Association.

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Original Contributions.

Heat Stroke (Thermic Fever) in Infants.

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and Surgery.

Heat Stroke, as an effect of atmospheric heat, is unknown in the category of infantile diseases; in fact, atmospheric heat as an etiological factor in the production of pathological conditions has as yet no place—that is, an independent place as a factor *per se*—in the treatises on pædiatrics.

Certain clinical facts that have come under my observation have convinced me that summer heat as an etiological factor deserves greater consideration than it has hitherto received, and furthermore that heat stroke is one of the pathological states that may be produced by it.

CASE I.—On the morning of September 1, 1874, I received a note from a colleague requesting me to attend for him baby M. as he had to leave the city for a day. I called that morning and found my patient a baby one year old, of good size and in good flesh; still nursed at the breast. The history of its illness was: The afternoon of the previous day the baby was seized with vomiting and diarrhœa; the family physician was called and prescribed neutral mixture $\mathfrak{z}\text{ii.}$, laudanum 12 drops, M. Sig., one teaspoonful to be taken every two hours. Of this mixture the patient had taken about half. When I saw the patient she was in the following condition: Pulse feeble, almost imperceptible; the eyes covered with a film; the respiration gasping and shallow; the muscles of the jaw, buccinator and masseter, were firmly contracted; the occiput and whole body very hot to the touch; the face was purplish and presented the appearance of a person in asphyxia. I did not believe that anything that medicine could do would save the child. Nevertheless,

to satisfy the parents, who clamored that something be done, and in accordance with the old adage "that while there is life there is hope," I directed an ice-bag to be applied to the head and flannel cloths wrung out of hot mustard water to be applied to the feet. I gave it at the same time about two teaspoonfuls—in very minute quantity at a time, for the reason that there appeared to be no voluntary deglutition any more—of a mixture of three parts water and one part whisky. I also prescribed a few grains of hydrate of chloral, which I directed to be administered gradatim—this with a view of relaxing the stiffened muscles of the jaw.

I returned at 1 P.M.; no better. The medicine was not taken, as the child did not swallow. I returned at 3 P.M. The thermometer placed in the axilla indicated 106° F.; the skin was dry and hot; the respiration shallow and less frequent; there was complete loss of consciousness. I had the child placed in a warm bath, the ice-bag being kept upon the head. For the time being it seemed to do some good, but after the child was out of the bath for a few moments it relapsed into its former condition.

I therefore directed the naked child to be wrapped in a sheet wrung out of cold cistern water (having a temperature about 70° F.). This was done, the child placed in its cradle and covered with a comfort; seven minutes by the clock the sheet was hot and almost dry; it was removed and replaced by a fresh one.

It was wonderful to observe the change in the child the moment it was wrapped in the wet sheet. There seemed to come over it a feeling of *bien aise*; the respirations became deeper and more regular, and it presented the appearance of being in a tranquil sleep; the moment the sheet became warm the baby grew restless, would roll around, groan, the respirations would become gasping, to be relieved by the application of a freshly wrung-out sheet. This application of the wet pack was continued all the afternoon and night. At 11 P.M. the thermometer recorded 103° F. The sheets would now remain cool for over half an hour. This procedure was continued regularly all night, the mother doing her duty very attentively and intelligently. The next morning at 8 A.M. the thermometer in the axilla indicated 101° F. The child still appeared unconscious. Treatment continued. At 1 P.M. the child's temperature was $99\frac{3}{4}^{\circ}$. At 4 P.M. I was again at the house with the family physician, who had just returned. Just as I was

about to place the thermometer in the axilla the baby rose up in its cradle and called "Mamma." Consciousness was restored. The wet pack was now discarded, and treatment continued with quinine in small doses and strong coffee. On the 4th of September the child was discharged well.

Remarks.—When I first saw the patient I did not take the temperature because, as I stated above, the child seemed doomed. On my return at 3 P.M., finding the child still living, I applied the thermometer in order to indicate to me, in my perplexity, a line of treatment ⁽¹⁾.

CASE 2.—June 25, 1885, I was called to see baby V., about ten months old, well developed and in fair flesh; nurses at the breast. It was taken ill in the night with vomiting and diarrhœa. At the time of my visit (10 A.M.) I found the baby lying in the cradle with eyes half closed, moaning occasionally, and rather restless. Considerable heat of head; temperature in axilla 104° F. Vomits whenever it nurses; diarrhœa not so marked as at the outset. I prescribed a mixture of spirits Mindereri, spirit. nitr. dulc. and a minute quantity of tinct. aconit. rad. to be administered in fifteen-drop doses every hour. In the afternoon I was told by the mother that the child had vomited the medicine every time it had been administered; it also vomited after nursing. Its temperature appeared higher. I directed the mother to omit the medicine for a few hours, and not even nurse it during that period; to sponge it off at intervals with lukewarm water and vinegar. About 9 P.M. I saw the little patient again. The temperature outside, which had been very hot all day, had become suffocating in the evening; the atmosphere was heavy; there was rain in the air. The temperature of the baby, despite repeated spongings, had risen to 105 $\frac{3}{4}$ ° F. There was great heat of head, great restlessness and hurried respiration; markedly rapid movement of the alæ nasi; great rapidity of pulse.

I directed the child to be placed in the cold, wet pack, after the manner described in Case 1, and staid for a time to see that it was properly done. The effect was marked; the restlessness disappeared at once; the respiration became tranquil and the child fell into a calm sleep. As soon as the pack became warm the restlessness and hurried respiration

(1) This case was reported (essentially as here), with others, in a paper entitled "Hydrotherapeutics" read by me before the Cincinnati Academy of Medicine, November 12, 1876, printed in the *Lancet and Observer*, June, 1877. Reprint. It is re-reported here to reinforce the chain of clinical evidence of which it forms the strongest link.

returned, to disappear immediately upon the renewal of the pack. The wet pack was continued all night. Next morning at 9 A.M. temperature in axilla $101\frac{1}{2}^{\circ}$ F. The baby had nursed twice in the night, and had retained the milk. No diarrhœa since last night. The wet cloths to be continued till noon. 1 P.M., temperature almost normal and pack discontinued.

No return of the unfavorable manifestations. The child was discharged as well the next morning.

These two cases are undoubtedly cases of *heat stroke—thermic fever* (*Ueberhitzung*), and this is clearly demonstrated by a careful consideration of the symptomatology and a comparison of the same with the phenomena obtained in experimental investigations as well as by the success of the therapeutic measures resorted to.

In the various experimental studies as to the effects of high temperatures upon animals, a series of phenomena, manifesting themselves progressively as the temperature of the animals rose, was observed. These may be summed up in the order of their appearance as follows: Nausea; Dyspnœa and cardiac irregularity with greatly increased rapidity of pulse; Heat rigidity (*wärmestarre*). In the experiments made by Krishaber upon himself, he noted, as a consequence of the rapid elevation of temperature: Increased rapidity of heart's action (pulse rising from 75 to 160); Headache; Malaise (*unbehagen*); Nausea ⁽¹⁾; phenomena exactly like those observed in the experimental studies on animals.

That in Case 1 we have a case of heat-stroke will hardly be questioned, the whole array of symptoms as described in the history pointing thereto. We have the initiatory phenomena, the progression in gravity, until at the time when I saw the case we have the climax reached, a state of asphyxia due to the diminished exhalation of carbon-dioxide and great destruction of oxygen; an effect observed by Litten in his experimental studies. In addition thereto, we note the setting in of heat rigidity, confined, it is true, to a limited number of muscles, but still manifesting itself. It is a typical case. ⁽²⁾

Case 2, though not so marked as the first, is, nevertheless, also one of heat-stroke. In this case, observed from an

(1) Litten: "Ueber die Einwirkung erhöhter Temperaturen auf den thierischen Organismus." *Virchow's Archiv*, Band 70.

Naunyn: "Fieber u Kaltwasserbehandlung." *Archiv. f. Eperim. Patholog. u Pharmacol*, Band 18.

(2) Consult the various text-books: Strumpell, Quain's Dictionary of Medicine, etc

early period, we note the increase in the gravity of the phenomena running parallel with the exaltation of the temperature. We have the initiatory nausea as shown by the vomiting that ensued when anything was administered by mouth or when the patient nursed; then the setting in of the heat dyspnœa, by the frequency of the respirations; the great rapidity of the heart's action as indicated by the pulse; the great restlessness, due partly to the dyspnœa and partly to the cerebral irritation, equivalent in the infant to the headache observed in the experimental study in adults.

Taking both cases together, we have a striking clinical verification of the phenomena noted in the experimental studies, the second case presenting the phenomena as they gradually develop, and the first illustrating the climax.

Two symptoms recorded in the history of our cases—viz.: vomiting and diarrhœa—are as yet unaccounted for in our study of these cases, similar phenomena not being recorded in the experimental studies referred to. A moment's thought, however, will convince us that they have the same etiological relation as the other phenomena, and that they form part of the history of heat-stroke.

We have the nausea as a marked manifestation of the overheating process, and certainly from nausea to vomiting is but a short step, especially in the infant that can not speak, to whom food is always tendered at longer or shorter intervals, and who will take this food impelled thereto by the thirst accompanying the thermic process; the result of such administration of food in the state of nausea being the immediate rejection of the same.

It is indeed so common a fact that an infant should vomit with any sudden and marked elevation of temperature that it really needed no further elucidation here.

There is, however, further and more direct proof in the fact that vomiting has been noted as one of the phenomena of heat-stroke in adults. ⁽¹⁾

It is an established fact that with a febrile elevation of temperature the digestive power of the stomach is greatly depressed, and much more so in the pathological state known as heat-stroke, where even lesser degrees of temperature elevation provoke graver disturbances than the more marked elevations of fevers. ⁽²⁾ Now, part of the food in the infant's stomach passing undigested into the intestinal canal, and

(1) Quain's Dictionary of Medicine, art. Sunstroke, et seq.

(2) Naunyn, Loc. Cit.

there acting as an irritant, excites abnormal peristaltic movement and a diarrhoeal discharge is produced.

But still another factor may be invoked here, namely: Stimulation of the vagus center. It has been experimentally demonstrated by Cyon that a sudden elevation of the temperature of the blood circulating in the brain (from 34° to 48° C.) causes slowing of the heart's action (from 23 to 5 in ten seconds) by stimulation of the vagus center in the medulla. ⁽¹⁾

Though ordinarily in cases of heat-stroke we have no such sudden great elevation of temperature as the experimental one above mentioned, still it is presumable that even a lesser degree of elevation would produce a certain amount of stimulation of the vagus center. This is confirmed by the increased frequency of respiration observed with less marked temperature elevations—an increase undoubtedly at first produced by stimulation of the vagus center. And it is more than probable that even minor degrees of temperature exaltation occurring quickly will have such an effect on the very mobile and impressionable nervous system of the infant.

It is well known that stimulation of the vagus excites peristaltic movements in the small intestines. ⁽²⁾ Now, this stimulation of the vagus, alone or superadded to the irritation produced by the undigested food, excites such rapid peristalsis as to give to the evacuations the diarrhoeal character.

Taking the foregoing facts into consideration we are justified in considering the vomiting and diarrhoea, mentioned in the histories of the cases above related, as part and parcel of the symptomatology of heat-stroke.

CASE 3.—Baby K. In the summer of 1885 I was called one night at 10 P.M. to see baby K., about one year old, and bottle fed. The family lived in a long, one-story frame building, the front and larger part of which was kept as a furniture store and the remainder as the living-rooms. The building was closed in on both sides, and all the ventilation and fresh air came through the front doors. In the afternoon he had been seized with vomiting; he threw up everything that was given him. Later on he became very restless, would not lie down in his cradle, and wanted to be carried about on his mother's arm. Being very much fatigued that evening—it was an exceedingly warm night,

(1) Naunyn, *Loc. Cit.*

(2) Foster's *Physiology*, Ed. 1880, p. 380.

not a breath of air stirring—and the room being very hot, the burning lamps adding to the heat, so that I felt stifled, I made but a careless examination, and prescribed a mixture containing hydrate of chloral.

Next morning on my visit the mother informed me that she had administered several doses of the medicine, but that the child had immediately vomited them; that it had been very restless all night, and would not leave her arm. I now examined the child carefully. I observed that as it was held in a sitting posture on its mother's arm it constantly inclined its head toward the head and shoulder of the mother, as if its head were heavy and difficult to support. The head was hot to the touch; the eyes were dull; the face was pale; the temperature, in axilla, 103° F.; the pulse about 130. Taking all these phenomena into consideration, I concluded that I had a case of incipient brain trouble before me. Whilst reflecting upon the therapeutic indications it occurred to me that perhaps the heat of the room, as I had experienced it, might be responsible for the illness of the child. I therefore directed that cloths wrung out of ice water be applied to the child's head. No medicine to be given it and no food; that in a few hours, after the steady application of the cold cloths upon the head, it be given every half hour a teaspoonful of a mixture of equal parts of lime water and milk; if this were well borne, then after further four or five hours the dose was to be increased to two teaspoonfuls.

The next morning I found my little patient much better. The child looked brighter; it held its head better; it did not vomit any more, and had rested much better in the night. Temperature, 101° F.; pulse much reduced in frequency. I directed the treatment to be continued; advised a slight increase in the quantity of milk and lime water, but positively forbade feeding with the bottle. The following morning I found my patient well, but weak. The baby had slept very well in the night, and in the morning it had taken its bottle well—the mother tried it, giving, however, but half the usual quantity—and with some avidity. Its temperature was normal, and it held up its head well.

At first glance it might appear that I had incorporated into this paper a case of beginning meningitis. It needs no long elucidation, however, to demonstrate clearly that this is not so, and that the case properly belongs in the category

under consideration. We have no prodromal history. The child is well up to the day upon which I made my first visit. There is no history of convulsions; no history of twitchings. There are no ocular phenomena nor, to say the least, any drowsiness. In fact, the major part of the symptoms that go to make up the history of meningitis are wanting.

But what do we have? We have a history of sudden invasion. We have vomiting of everything that is administered, evidence of a state of nausea; we have general elevation of temperature, and that to a marked degree; we have great restlessness; symptoms which, taking the season and surroundings into consideration, all point to one morbid state, namely, heat stroke.

It is true that the attitude of the child, manifestations of the greatest importance in infantile symptomatology, seemed to point chiefly to the head as the seat of morbid processes, but, cerebral disturbance, as has already been said above, is one of the features of heat stroke even in its earlier stages. Obernier states that in heat stroke with a temperature rise of only to 102–103° F., painful malaise (*schmerzhaftes unbehagen*), *headache* and rapid pulse (132) are present. ⁽¹⁾

Furthermore, it is more than probable that the greater prominence of the head symptoms in this case is due to the fact that the greatest heat was reflected from the ceiling, as described in the history, and acted with full force upon the comparatively bare head of the infant, thus producing a greater amount of cerebral irritation than if the heat had been more equably distributed, and its influence exerted upon the whole body.

Etiology.—As seen from the histories, nothing extraordinary occurred to these infants to which the heat stroke could be directly attributed. There was no undue exposure to the sun or to excessive artificial heat. There remains, therefore, as the sole etiological factor, the atmospheric heat as created in the apartments, wherein they dwelt, by the season, *i. e.*, the summer. It is true, however, that the habitations of these infants were of such character that even a not excessively hot summer would produce therein a degree of heat that might be readily productive of thermic fever in infants, who are so very susceptible to heat.

Case No. 1 lived on the second floor of a two-story frame building located in a narrow street at the foot of a hill, with

(1) Naunyn, *Loc. Cit.* p. 59.

a tier of streets rising above it. The first floor was occupied by a bakery. Though the two rooms on the second floor were comparatively large, there was no ventilation; the windows of the front room opened on the narrow street with much higher houses on the opposite side; the window of the rear room opened into a small court with a large frame building at the farther end, and beyond this there towered, one above the other, the houses on the tier of streets on the hill. The front room was divided off from the rear room by a full partition wall, communicating only by a narrow door, so that a free current of air was an impossibility. In the rear room all the cooking for the family, and all the service requiring fire, was done; the front room served as a bedroom for father, mother and four children. Owing to the narrowness of the street the front shutters had to be kept closed at night. To this must be superadded the location of the rooms—very near the roof, only separated from it by a small space—and the heat created in the building by the bakery.

Case 2.—The family lived in a small back room of a tenement with door and window on same side opening onto a close court. This room was on the ground floor, and served as a kitchen and bedroom for the mother and four children, and from the miscellaneous character of the inhabitants of the building and the fact that a passage way, which was always open, led into the court from the street, they were compelled to keep everything closed even on the hottest night.

The habitation of Case 3 has been fully described in the history.

That heat stroke can occur in overheated rooms is so well known and so well established a fact that it needs no further proof here. ⁽¹⁾

TREATMENT.—It would be a work of supererogation now, after the labors of Jurgensen, Immermann, Liebermeister and others, to enter into any long discussion as to the *rationale* and the propriety of the hydropathic treatment in high temperatures, and if the same be true of fever, in which the philosophy of its application is rather complicated ⁽²⁾, it is certainly true of the pathological state under consideration, namely: Heat stroke, in which the therapeutic indi-

(1) Quain's Dictionary of Medicine, art. "Sunstroke."

(2) Ziemssen's "Hdbuch der Allg. Therapie. Antipyr. Heilmethoden, von Liebermeister," p. 15.

cation is simple: rapid abstraction of heat. Naunyn thus clearly expresses himself on this point: "To avoid any misunderstanding on this point I refer to it again, and declare expressly and distinctly, that in heat stroke I regard the rapid cooling of the system with cold water an absolute necessity." (1)

My manner of following out the indication for treatment is related in the histories. The wet pack there referred to, in Cases 1 and 2, was as follows: A large muslin sheet was folded in its length and then in its breadth and wrung out of cold water; the naked child was wrapped in it, placed in its bed or cradle and covered with a blanket. The nurse or mother watched the sheet, and as soon as it became warm it was removed and replaced by another which had been meanwhile cooling in the water; and this procedure was continued until the temperature reached the normal.

I am so explicit on this point for the reason that my method of using the wet pack differs from the wet pack described by Winternitz (2) and by Liebermeister (3).

I preferred this method for various reasons mentioned in the paper entitled "Hydrotherapeutics," already referred to.

It is the method easiest of application. All who have had any experience with children know the difficulties attendant upon putting a sick child into a bath—and more especially a cold bath (it could have been done easily in Case 1, but, fortunately for them, all cases are not seen at so late a stage); what stratagems must be resorted to; what struggles must be sustained once the child is in the bath; what cries! all certainly not beneficial to the little patient.

In the wet pack the child feels so comfortable, and this added to by the horizontal position which it can maintain, that the *bien aise* felt is expressed in the countenance, and it is only when the pack becomes warm that the child cries and shows any uneasiness.

But a more cogent reason is this: that I believe the wet pack as here described is a more powerful agent for the abstraction of heat than the cold bath.

It is true that the cold bath produces a marked and rapid lowering of the temperature, but this effect is not permanent, and in a longer or shorter period of time the temperature

(1) Naunyn, Loc. Cit.

(2) Winternitz, "Hydrotherap." Ziemssen's Handbuch der Allg. Therapie.

(3) Liebermeister, Loc. Cit.

has again risen, and frequently to its previous height. The cold bath must then be repeated. ⁽¹⁾

En parenthese, it is a question that has presented itself to me, whether these shocks to the system, and undoubtedly there are ⁽²⁾, consequent upon the use of the cold baths, of depression and elevation, depression and elevation, may not have some deleterious action upon the organism.

The wet pack does not produce so rapid a depression of the temperature; but, on the other hand, if applied as here detailed, it is not followed by a reëlevation; the heat is abstracted gradually but continuously, and in the time required for this gradual abstraction the system can accommodate itself to the changed condition.

In Cases 1 and 2, in which the temperature was very high and at a dangerous point, in the one 106° and in the other nearly as much, and in which as large and as rapid an abstraction of heat as possible was indicated, I applied the wet pack to the whole body, as already described. In Case 3, however, in which the temperature was but 103°, and no immediate danger threatened, I used only the limited pack, *i. e.*, a heavy towel folded 3 or 4 times, wrung out of ice water, and applied to a limited portion of the body—in this instance, the head. I believed that the chief source of trouble lay in the great heat reflected from the ceiling upon the head of the infant, and hence it appeared to me that the therapeutic indications, *viz.*: an obviation of the cause and abstraction of the heat already absorbed, would be accomplished by the limited wet pack upon the head. The result, as already stated, was all that could be desired.

It will be observed that whilst in the general wet pack I used only the ordinary hydrant water, in the limited wet pack I resorted to ice water, thereby greatly enhancing its cooling powers.

From all that has been said, from the careful study of the symptoms, and a careful comparison of them with the phenomena produced in the experimental studies of heat effects, from a study of the etiological conditions and from the results obtained by the special treatment, I believe myself justified in claiming that "heat stroke" or "thermic fever," as resulting from overheated apartments, must have a place in the category of the summer diseases of infants. Though I have seen but the few cases recorded here, it can not be

(1) Liebermeister, *Loc. Cit.*

(2) As this is not the place to go into this in detail, I will only mention the rigors that accompany the elevation.

doubted that many more have occurred, and do still occur, every summer in the larger cities, wherein a great part of the population dwells under conditions as unfavorable as those referred to in the etiological section of this paper, or even more so; for it certainly is not to be supposed that mine were the only cases that occurred; but they have hitherto remained unrecognized, being engulfed in that great vortex that is made to swallow so many things, to wit: cholera infantum.

The importance of the recognition of the fact that heat stroke is of more frequent occurrence than has hitherto been believed, and that it may be produced by the heat of the apartments, is not to be underestimated—more especially as from their symptomatology these cases are apt to deceive. Cases 1 and 2 present many analogies to cholera infantum, and would be declared to be such by the majority of practitioners. It is a fact that most cases of vomiting and diarrhœa occurring in infants in the summer months are set down as cholera infantum, and it is so taught in the books.

This accounts for my uncertainty as to the therapeutic measures to be resorted to in Case 1, for though this was a typical case of heat stroke, still my mind was so occupied with the previous history of vomiting and diarrhœa that I looked upon it as a case of cholera infantum *in extremis*, in which nothing would avail, and had it not been for some previous experience with the wet pack I should not have dreamed of resorting to hydrotherapy. And although a careful study of the case afterwards disclosed to me its true nature, nevertheless, when I encountered Cases 2 and 3 I was still in a state of uncertainty as to their true character. Cases like the third are apt to be mistaken for cases of cerebral disorder. In fact, in West, *Diseases of Children* ⁽¹⁾, we find a case of heat stroke from exposure to the sun, treated of under the head of cerebral congestion.

The recognition, therefore, of the true character of these cases when they present themselves to us is of vital importance to the little patient, for upon it will depend whether the correct and appropriate therapeutic measures will be resorted to for its relief or otherwise. If correctly diagnosed the proper measures (already indicated above) will be instituted and crowned with success, even in apparently desperate cases; if not, it will be dosed and medicated until death closes the scene.

(1) West, Lectures on Diseases of Children, Philadelphia, 1866, p. 48.

Asthma.

BY DR. E. S. M'KEE, CINCINNATI.

Aronsohn¹ reports the artificial production of asthma in a clergyman by the attempt to remove a fibrous polyp of the right turbinated bone. The patient had never before suffered from asthma, and only complained of hoarseness. Schmugelo² has written well and interestingly of asthma as considered especially in relation to nasal disease. He believes, with Germain See, that asthma must be considered a bulbar neurosis consisting in an excessive reflex irritability of the respiratory center. This may be disturbed in its action by a competent peripheral irritation, and that nasal diseases sometimes, though not necessarily, constitute such an inciting factor in the asthmatic attack. In his own material he has noted asthma associated with nasal polypi in twenty-two per cent. of his cases, and with chronic rhinitis in eight per cent.

Carpenter² has found some of his most distressing cases due to a retroversion of the uterus and pressure on the sacral nerves: the irritation being reflected to the pneumogastric. Further attacks were prevented by reposition of the womb and adjustment of a pessary. He thinks asthma in childhood is often due to the improper management of the child at birth. A rhinitis may be developed a half-hour after birth by undue exposure and a rapid evaporation from the body and radiation of heat. The child starts in life with a cold, experiences continual recurrences, thereby establishing chronic or subacute catarrhal inflammation of the upper air passages, which, with its sequelæ, furnishes the most potent predisposition to asthma. Berkert³ gives the surprising statement that asthmatics have remarkably small hands. Busey⁴ has met with much success in the use of jackets of oiled silk wadded with cotton-wool about the chest for the prevention of asthmatic attacks. Bufalini⁵ has found much benefit from the use of Chino-iodine, also dry fumigations, as datura, belladonna, hyosciamus, nicotia, etc. Chivot⁶ reported to the Societe Medicale d'Amiens favorably as to the use of pyridine in asthma. Hoffman⁷ recommends the sub-

1. Aronsohn, *Centralblatt fuer Klin. Med.*, *Journal Am. Med. Assn.*, March 1, 1890; *Deutsch. Med. Wochenschrift* XV, 17, 1889; *Schmidt's Jahrbuecher* No. 3. 2. Berkert, *Asthma Considered Specially with Reference to Nasal Diseases*, Dublin *Journal Med. Soc.*, 1890. 3. *Times and Register*, January 4, 1890. 4. *Bronchial Asthma, its Pathology and Treatment*, Churchill, London, 1889; *Glasgow Med. Journal*, February, 1890. 5. *Med. News*, April 19, 1890. 6. *Bufalmi Intern. Klin.*, *Rundschau*, February 9, 1890. 7. *Gaz. Medicale de Picardie*, March, 1890. 8. *Allg. Med. Centrall.*, *Zeitung*, 1890.

cutaneous injections of nitro-glycerine, .0005-.001, in the severe cases of asthma. The action of the nitro-glycerine is instantaneous when used at the climax of pain in the chest. Cronigneau⁸ makes an extensive report on the use of lobeline, which he prefers to give in pill form to adults and in syrup to children. He has not observed the emetic or nauseant action with the use of this alkaloid. Drezewiecki⁹, collaborator, reports the successful use of strophanthus in asthma, which he gives during the attack in ten-grain doses. The experiments of Proffer have proven that strophanthine lessens the excitability of the vagus. It is given three times daily, at intervals, for some time, and the asthmatic attacks have been arrested for a long period. Dieulafoy¹⁰ advises a solution of hydrochlorate of cocaine in water 1 in 8, painted as high up as possible by means of a camel's-hair brush, or, if preferred, it may be sprayed into the nose and throat. Knight¹¹ reports the case of a banker who could stop an attack by playing for large stakes. He does not say that other people could be relieved in the same way. Mays¹² reports marked success from the hypodermic injection of strychnine and atropia daily. He commences with strychnine $\frac{1}{50}$ grain and atropia $\frac{1}{180}$, and gradually increases the strychnine $\frac{1}{20}$ and atropia $\frac{1}{100}$. He gives three doses daily until an impression is made on the disease, then every other day, and as the patient improves it is gradually abandoned.

Phyrosis, or an unnatural constriction of the sphincter muscles, will, according to Edson¹⁴, cause asthma, and the relief of this condition will relieve the asthma.

The relation of asthma to other diseases is discussed by West¹⁵. He held that it stood in no relation to other affections of the lungs other than to emphysema and chronic bronchitis. He stated that it usually disappeared in patients affected with phthisis, and cited two cases. Dyspnoea in connection with heart disease was often seen, but the paroxysms differed entirely from the true asthmatic variety. True cardiac asthma was extremely rare and most difficult to treat; it had no connection with angina pectoris. He did not think asthma due to irritation of the gastric mucous

No. 9; Med. Chir. Rundschau, 1890, No. 5, March 1, p. 130, Les Nouveay Remedies, 24, April, 1890. 9. Journal de Med. de Paris, November 17, 1889. 10. Bulletin Medicale, January 22, 1890; London Medical Recorder, February 20, 1890; Journ. des Sciences Med. de Lille, March 23, 1890; Le Praticien, Moniteur Ther. 11. Satellite, January, 1890. 12. Analectic, April 18, p. 155; Boston Med. and Surg. Journal, January 23 and April 3, 1890. 13. Boston Med. and Surg. Journal, April 3, 1880. 14. Chicago Medical Times, November, 1890. 15. Lancet, November 22, 1890. 16. Berliner Klinik, March,

membrane itself, but the absorption and circulation in the blood of some product of an irritating nature. Dyspnoea was common in affections of the kidney, but true asthma was very rare. Asthma appears proven to have some connection with affections of the nose, as polypus, chronic rhinitis, paroxysmal sneezing, etc. The association of asthma with pharyngeal diseases is very rare. The pressure due to diseases of the mediastinum seems to occasion asthma. Association of asthma with diseases of the skin he thought only accidental. He believed a sufficient number of cases of cerebral diseases associated with asthma had been recorded to make it more than a coincidence. It had been observed, though rarely, to alternate with insanity and hysteria. He adopted the hypothesis that there is an asthma center in the medulla, which could be acted upon from above by emotion, various *pschychoses*, epilepsy and some cerebral lesions; in the center itself by uremia and dyspepsia; from below by disturbances of the special senses, such as the olfactory and optic nerves, by stimulation of the nerves of common sensation, as of the fifth in the face and by cutaneous irritant rashes. He regarded asthma as a reflex neurosis, producing spasm of the bronchi and diaphragm, associated with bronchial vaso-motor disturbances and an unstable condition of the respiratory center. It so closely resembled epilepsy that Hughlings Jackson defines it as respiratory convulsions. Sexual asthma is the subject which Peyer¹⁶ endeavors to prove in his report of eleven cases in the male and five in the female. In almost all the male cases there was a history of spermatorrhœa, together with self-abuse and impotence; the asthmatic attacks following immediately on coitus, self-abuse or other great sexual excitement.

Asthma in children is extensively discussed by Jacobi¹⁹, Romme²⁰, Baginski²¹ and Bert²². The carbonate of ammonia has proven very beneficial in the hands of Fauth¹⁷ in a number of reported cases. His theory is that the carbonate of ammonia liquefies the products of bronchitis, the Curschmann's spirals become liquefied, removing the irritation, if indeed they cause it. Mechanical instruments for the treatment of asthma and empysema are fully discussed by Steinhoff¹⁸.

1890; London Medical Recorder, April 20, 1890. 17. Journal of the Medical College of Ohio, October, 1890. 18. Illustrirte Monatschrift Aerzte, Polytechnik, November 1, 1890; Berliner Klinische Wochenschrift, October 6, 1890. 19. Archives of Pediatrics, November, 1890. 20. La Tribune Medicale, November 27, 1890. 21. Lehrbuch der Kinderkrankheiten, 1889. 22. Etude Clinique sur l'asthme essentiel chez les enfants, These., Paris, 1890.

Selections.

Surgery.

From the Nashville Journal of Medicine and Surgery.

THE SURGERY OF THE CAUDA EQUINA.

Dr. Leopold Laquer, in the *Neurologisches Centralblatt*, describes a case of compression of the cauda equina that came under his notice in September, 1888. The patient at that time complained much of a pain in the sacrum, and was unable either to sit or to lie with any comfort. In December, 1889, there was an exaggeration of the previous symptoms, with marked alteration in motion and sensation, as well as some atrophy of the lower extremities. The electrical reactions of both muscles and nerves were normal, and the reflexes were normal. Despite all treatment, the symptoms of pain and stiffness of the lower part of the back continued to increase in severity until September, 1890, when the patient was able to move only in the most careful way, and was obliged to hold his back in an attitude of extreme kyphosis. On the right side the patellar reflex was abolished, and on the left side it was very weak. Sensation was absent in the scrotum and perinæum, and also in the lower extremities. The sexual power was weak. There was some atrophy of the quadriceps of each side, but there were no trophic changes, and there was no ataxia. The patient's condition was one that obviously called for interference of some sort, as death from exhaustion was imminent. The symptoms, taken collectively, led the author to the diagnosis of compression of the cauda equina, from some unknown cause, followed by degenerative neuritis. Dr. Louis Rehen cut down upon the sacrum, and, laying open the entire canal, disclosed a small extradural tumor in the middle of its lumen. After its removal, further examination of its growth showed it to be a lymphangioma cavernosum. Recovery was prompt. By the end of the second week after the operation the patient was free from pain, and sleep was natural. Four months later there was only a small opening left in the sacrum, the patient was able to go about holding the body in a normal attitude, the functions were nearly restored to the normal state, and the reflexes, though still diminished, were equal on both sides.—*N. Y. Med. Journal.*

CONGENITAL OCCLUSION OF THE URETHRA.

Campbell (*Brit. Med. Jour.*, February 28, 1891) reports a case. No urine having been passed at the end of twenty-four hours, an examination was made, when the meatus appeared to be covered by a thin layer of membrane. No canal, however, appeared beneath it. Assistance was called, and an attempt was made to force a passage. By the aid of a sharp and a blunt probe, a stilette, and a No. 1 silver catheter, a passage was made down to the subpubic arch. Great care was necessary to keep in the imaginary line of the urethra, the only guide being the finger. With the finger in the rectum, a plunge was made forward with the stilette. It entered some place where it met no resistance, but, on withdrawing it and passing a catheter, no urine was obtained. Twelve hours later urine was passed freely. At three years of age the child was apparently in a normal condition as regarded the urethra.—*N. Y. Med. Journal*.

RELATION OF MALARIA TO SURGICAL OPERATIONS.

Dr. M. Perez (*Annals of Surgery*) says one should avoid as much as possible operations in places or districts where malaria prevails.

In cases of operation upon individuals residing in malarial districts, or even those who have formerly dwelt in such regions, although they may have never have presented malarial symptoms, they should be subjected to a preliminary treatment by quinine, in order to avoid complications.

Individuals may be met with in whom there is a latent existence of the germ of malaria. These latter may develop when the strength of the patient has been lowered by hemorrhage, suppuration or other causes.

If one had to decide between a bloody and a bloodless method of operation, the latter should be chosen, for beside avoiding hemorrhages, a mixed infection is thus prevented.

In cases where operation on account of some suppurative process is necessary, and where malaria has formerly existed, a careful analysis of the urine and an examination of the liver, spleen and kidneys should be made, for the patient may be suffering from diabetes or amyloid degeneration.

If hemorrhage or intermittent pain follow the operation, they may be combated by the various preparations of quinine.—*American Lancet*.

STATISTICS OF BREAST AMPUTATIONS.

Terrillon, in a recent number of the *Bulletin General de Therapeutique*, publishes a practical paper on the immediate and remote results of a hundred cases of amputation of the breast performed by himself. They are divided into forty-eight cases of carcinoma with enlarged axillary glands; thirty-one of mixed growths, mainly sarcomatous; twenty-one of adenomata or cystic growths. Out of the first series, forty-two are dead, but recurrence has taken place in all of the remaining six. Of the second series only two are dead; one of these lived eight years, recurrence taking place in the region of the scapula; the other lived four years, recurrence showing itself in the axillary region. Of the last series all the patients are alive. Thus, out of the whole number submitted to operation, fifty-six are still living, and forty-four were only benefited in varying degrees. With regard to the forty-four carcinomatous cases, the following details may be given of the periods of their survival: One patient lived seven years, two survived five years, four four years, five three years, eleven two years, twelve one year and a half, and, lastly, eight less than one year. He remarks that recurrence seems to be the rule when, after removing the breast, it is found at the same time necessary to extirpate some of the axillary glands. The recurrence, moreover, most commonly takes place in the first year; that is, there is seldom survival beyond the seventh or eighth year. The paper includes various remarks about complications arising from the operation and the after treatment.—*The Med. Press*.

HOW TO KEEP NEEDLES FROM RUSTING.

Dr. R. H. M. Dawbarn writes to the *New York Medical Journal* regarding the above subject: "For the past year I have been pleased with the results of a new plan—new to me, that is, though very probably not to others. This is simply to keep my needles in alcohol. For extreme safety against rust I use absolute alcohol; but the commercial article would probably be efficient. At least, some needles that I have kept in common alcohol for a month as an experiment are as bright as ever. Upon buying the needles I immerse them in benzine to remove the grease. Then, after running them through a towel, I plunge the point (a cutting-edge Hagedorn) into a bit of cork the size of a pea—to avoid dulling from jolting—and, finally, with their corks,

they are put and kept in a wide-mouthed, glass-stoppered bottle filled with absolute alcohol. After use, I sew through a thick, wet, soapy towel repeatedly, cleanse the eye with a thread, immerse in benzine, and finally replace in the alcohol. This last is certainly an efficient disinfectant, besides being an excellent protector against rust. By the bye, I long ago gave up using (save in bowel work) any other than Hagedorn self-threading needles, which are a decided comfort and, when properly made, do not cut the thread."—*Med. Record*.

FOREIGN BODIES IN THE AIR PASSAGES.

Dr. Sprengel, of Dresden (*Centralblatt für Chirurgie*), affirms that the question as to which of the bronchi is the seat of a foreign body impacted in the air passages can in many cases be readily and positively settled by the aid of auscultation. It is usually assumed that, if the air does not pass into one lung, the corresponding bronchus is completely closed by the foreign body, and that if the obstruction of the bronchus be incomplete, there will be a sibilant sound on inspiration at the seat of impaction, whilst the respiratory sounds on the opposite side will remain normal. Under certain circumstances, however, the determination of the precise situation of the foreign body may be attended with some difficulty. As a proof of this, a case is recorded by Dr. Sprengel of a little girl who came under his care suffering from much dyspnoea in consequence of the presence of a foreign body in the air passage. There was a sibilant inspiratory sound over the right bronchus, while on the left side the respiratory sounds were almost inaudible. Tracheotomy was performed below the isthmus of the thyroid body, and the foreign body was seen occupying the whole lumen of the trachea, just above its bifurcation. The auscultatory signs in this case are to be explained, the author states, by the nature of the foreign body, which was a large hollow bead, oval in form and open at each end. This, it is conjectured, was fixed at one end into the upper part of the right bronchus, and stretched across the lower end of the trachea, completely occluding by its distal portion the orifice of the bronchus on the left side. Thus the air was prevented from entering into the left lung, whilst it passed into the right lung through the tube formed by the large hollow bead, the narrowness of which, and perhaps an occasional occlusion by mucus, was the cause of the severe dyspnoea

and of the sibilant sound during inspiration. This case, it is pointed out, shows that a hollow or tubular foreign body fixed at the lower part of the trachea may, by the signs which it produces, lead one to assume that it is fixed in one of the bronchi, since the air enters one lung and is excluded from the other. The absence of respiratory sounds on one side of the chest, or a sharp whistling sound heard over one bronchus, can not be regarded as absolutely diagnostic of the presence of a foreign body in a bronchus unless we know that such body is a solid and not a tubular one.—*Brit. Med. Journal.*

Medical.

From the Nashville Journal of Medicine and Surgery.

A PROCEDURE FOR ARRESTING ATTACKS OF WHOOPING-COUGH.

The procedure employed by a Swiss physician, Dr. Naegely, consists in elevating the hyoid bone and larynx, and maintaining it in this position for sixty to ninety seconds. The physician faces the patient and places his thumbs upon the greater cornua of the hyoid, while the index fingers are applied over the ears and the other fingers over the nucha. This procedure, which at once arrests the attacks, has been also employed by the author with equal success in the treatment of nervous conditions, neuralgia of the trigeminus, hemicrania, globus hystericus, nausea of nervous origin. He finds that one seance is often sufficient to cause the complete disappearance of the pain, while in other cases several sittings are required. More than fifty cases have been treated by this method.—*Semaine Medicale.*

TWO DRACHMS OF IODOFORM AT A DOSE.

The case that I am about to cite is of interest on account of the large dose of iodoform taken by the mouth, the length of time it remained in the intestinal tract, and the comparatively mild symptoms produced.

In response to a call at the Eastern Dispensary, I visited Bridget M., who was suffering from a large axillary abscess. Previous to my first visit the abscess had been poulticed, and I ordered this continued, and prescribed for two drachms of iodoform, to be used in subsequent dressings, and an order for bandages. I requested the nurse (a sister-in-law of the

patient) to keep everything after she received them until the next day, which was Friday, or the day following, when I would call and open the abscess.

I called in the afternoon on Saturday, and was told that the patient was given the two drachms of powdered iodoform (the amount put up by the dispensary apothecary) on Thursday evening. I hastened in to see the patient, who said she had taken the powder on Thursday evening, and felt no effect until Friday night, when she was taken with severe headache, griping pains in the abdomen, and purging, which continued all day Saturday. This in no way alarmed her.

On Monday the pains had disappeared. She had no after symptoms of irritation. The odor was in her breath for several days; also the taste remained in her mouth.

The abscess being so extensive as to require ether, I transferred her to Bellevue Hospital, where she is now.

In justice to the apothecary, I will state that a label "for external use" was on the powder.—*New York Med. Journal.*

TREATMENT OF INFANTILE CONVULSIONS.

First of all, take the child into an airy apartment, remove its clothing, and see if there does not exist some irritation of the skin, due, perhaps, to a pin. Then lay the child on a somewhat hard couch and apply cold ablutions; or else plunge the child in a tepid bath, containing mustard.

The affusions must be made over the whole body, at the same time cold water should be applied to the head, or prolonged irrigation by means of a stream of cold water permitted to fall on the fontanel may be practiced.

In Germany and Switzerland, convulsions accompanied by a high temperature are treated by cold baths.

As the irritation may come from the intestinal tract, emetics or purgatives should be given, according as it seems advisable.

Where there is cerebral hyperæmia, leeches applied behind the ears, or to the lower extremity of the thigh, or to the tibio-tarsal region, may cut short the attack. In strong children bleeding may even be tried.

Warm poultices to which mustard has been added may be applied to the lower extremities, or the carotids may be carefully compressed.

Chloroform inhalations give temporary relief, but their

repetition is dangerous. Great caution must be exercised in their employment.

When the convulsive state prolongs itself we may administer from five to forty centig. of oxide of zinc, with equal parts of hyoscyamus.—*Weekly Med. Record.*

THE NUTRITIVE VALUE OF RECTAL INJECTIONS OF EGG ALBUMEN.

The assertion of Voit and Bauer and Eichhorst to the effect that egg albumen is absorbed by the rectum only in the presence of a certain proportion of chloride of sodium, but is returned unaltered with the fæces if this agent be absent, had led Huber to investigate this point anew, and to make his observations on man, and not on dogs, as his predecessors had done. The experiments were planned with great care, and the quantity of albumen removed from the body, both by the urine and the fæces, was estimated. As the outcome of several series of experiments, the results of which show a great agreement, the author gives as his conclusion that egg albumen simply beaten up is absorbed by the rectum, but only in very small quantities, and consequently a nutrient enema of this kind possesses hardly any value. When, however, a certain amount of common salt is added (fifteen grains to each egg in the present series of experiments), the quantity of albumen absorbed is doubled. Peptonized egg albumen was absorbed in very slightly greater proportion than that treated with common salt, but of peptonized albumen with salt, between sixty and seventy per cent. was absorbed, and we, therefore, have in this mixture an extremely valuable material for nutriment enemata.

In no case of Huber's were the enemata expelled; nor was albuminuria ever found to occur after their use.—*Med. and Surg. Reporter.*

IRON IN LARGE QUANTITY IN ANÆMIA.

In a very marked case of anæmia in a young girl of nineteen, H. Taylor, after being assured of the satisfactory condition of the digestive functions, prescribed for her a drink of a diluted solution of the perchloride of iron (v-xxv drops to 30 cc. (℥j) of water). He gave her to understand that the more she took day and night, the better it would be for her, and the sooner would she recover. She entered heartily into his plans, and in twenty-seven days took almost 900 grams (℥xxx) of tincture of the perchloride of iron (accord-

ing to the British Pharmacopœa) instead of 100 grams, the maximum dose with most physicians. There were no unpleasant phenomena on the part of the digestive tract. To keep the bowels regular, he gave her daily a pill of aloes and nux vomica. The result was complete cure after four weeks of treatment. The author recommends this mode of treatment, which allows the ingestion of large quantities of iron, without in any way interfering with the health of the patient. Should the iron commence to show any unfavorable effects (constipation, etc.), the patient should stop the medication, which no longer agrees with him.—*La Courrier Médicale*; *La Gazette Médicale de Montreal*.

Plaster Bandage in the Treatment of Sprained Ankle.

BY JESSE H. PEEK, M.D.,

Ex-Member Medical Examining Board of Virginia, etc.

When I was a boy a sprained ankle was considered a serious lesion, and it took weeks to get well. Clay and vinegar were in demand, and the doctor was seldom consulted; the injured one hobbled about to get well as best he could. The fact is that the old people were afraid to keep the joint perfectly at rest, lest it might become stiff.

My method for the treatment of this injury will be described in the history and treatment of the cases reported below.

I am well aware that I am not describing anything new, but if those of my readers who have never used it will try it, they will find it vastly superior to the treatment of rest in bed and evaporating lotions.

CASE I.—The first case which I recall was that of a laborer, fifty years of age, well developed, about five feet eight inches in height, and weighing 150 pounds. He fell on his ankle. When I saw him, one hour after the accident, he was sitting in a chair with his feet on a pillow in another chair. The pain was excruciating. The ankle was well encased in clay and vinegar. The joint was much swollen, and the least motion gave intense pain. As well as I could make out there were no bones broken.

I ordered him to bathe the joint repeatedly in hot water through the afternoon until late bedtime, and gave him a hypodermic injection of morphine.

My method of bathing the joint is to start with water as warm as can be comfortably borne, rapidly increasing the temperature by adding boiling water, and dipping water out of the vessel as the hot water is added. Continue this process for twenty minutes. This must be done at intervals of two hours for three or four times.

On the following morning I saw the patient again. He had passed a fairly comfortable night; but as the effects of the morphine had worn off, the least movement of the foot gave pain. I snugly applied a piece of flannel from the instep to above the ankle joint, and over this a plaster bandage. I then put the foot at the window, exposed to the sunshine, and resting on a chair, directed him to let it remain there until the plaster was hard, and not to put the foot on the floor that day.

Three days afterward he was out in his yard putting up a fence. He said the joint was immovable, and gave him no pain to bear his weight on it. He made a rapid recovery.

CASE 2 was that of a "society" lady, who, in returning from an evening's entertainment, stepped on a stone and sprained her ankle.

I saw her the next morning. Her mother had bathed the joint in warm water and applied a mixture of sweet oil, laudanum and arnica. I found the joint swollen and very painful. The hot-water treatment was used to reduce the swelling, and on the next day the plaster bandage was applied. As soon as the dressing hardened, there was complete relief from pain, and she could bear her weight on the injured foot. In a few days she walked out to church.

CASE 3.—This case has been very recently discharged. I was sent for to see a man sick at the residence of Mr. L., a well-to-do farmer. After I had prescribed for the sick man, I was requested to see Mr. L. I found him sitting before the fire with his foot wrapped up in flannel cloths, and resting on a chair before him. He said he had sprained his ankle five days before, but his wife said that nothing could be done but to keep still and bathe the ankle with laudanum and arnica. He had bathed it in hot water; clay and vinegar had been applied, hot lye used, etc.

I found the joint very much swollen and sensitive to touch. He could not bear any weight on it, and when the foot hung down, the ankle would swell much more and become very painful.

I applied the bandage on the next day, Saturday. On Monday he was walking about his place with the aid of a

crutch. There was no pain, only a little soreness, caused by the bandage rubbing the front of the leg. I split up the bandage about an inch, trimmed off the edges and relieved the parts. He wore this dressing for a few days and was cured.

Among the advantages claimed for this method over the old plan, none stands out with greater prominence than the absolute and immediate relief from pain; and this is a factor that the surgeon desires to cancel as soon as possible in the treatment of any injury. My patients tell me it is very inconvenient having such a weight hanging on their leg, but there is no pain.

Again, by this treatment the patient can attend to his business—at least, partially—as soon as the plaster sets. This is quite a consideration. The farmer in the case above cited was able to conduct and look after the operations of his farm.

Try this treatment, those of my professional brethren who have not, and I am sure you will be pleased. — *Va. Med. Monthly.*

Trusses for Children.

BY D. E. GARMO, IN ARCH. OF PED.

It is advisable to begin treatment as soon after the development of the hernia as possible; I have repeatedly put trusses on babies ten days and two weeks old, and have never had occasion to regret beginning treatment at this early date. It is an erroneous idea, and unfortunately a rather prevalent one, that the baby will "outgrow" this defect, or that it is "better to delay treatment until the child is older."

In making the selection the following points should be borne in mind: First, the spring should be so tempered that it may be readily bent to the exact shape of the child, and its pressure added to or diminished by increasing or removing the amount of curve which it possesses; second, the entire truss should be impervious to moisture, that it may be frequently washed; third, it should be durable.

The more simple in design the truss is, the better it is, as a rule.

For the treatment of single inguinal hernia in the infant, the spring which, from the pad, crosses the front of the abdomen, passes around the hip of the opposite side, and

across the back, is one of the most valuable appliances that can be used. This truss can be obtained of almost every druggist in the country, the spring covered with either hard rubber or celluloid; it is known in the trade as the "cross-body" truss. A spring of this style will surround about two-thirds of the pelvis, and while it is supplied with a strap to complete the circumference, it readily holds itself in place whether the strap is buttoned or not. Those covered with celluloid have the advantage of being readily shaped to the form without heating (which is necessary in shaping the hard-rubber springs), but have the disadvantage of not being so durable as those with the rubber covering. Almost all infant trusses, as sent out from the shops, are too strong in pressure, and this should be carefully guarded against. Only a light pressure is required if its location is at the right spot. A very common, almost universal, error in applying trusses is in putting the pad too low. If the pad rests over the pubic bone, its efficiency is at once destroyed. It should be borne in mind that the design of truss-wearing is to keep the bowel entirely within the abdomen, and in order to accomplish this in a thorough manner the supporting pressure must be very nearly over the *internal* ring. The descent of a hernia may be stopped at the external ring, and, while it may in this way be kept out of sight, it still occupies the upper part of the canal, and a cure will never result. A truss-pad that rests against the bone can not thoroughly protect the upper part of the canal: it is held away from it, and the child is made uncomfortable. When the truss is fitted high the parts back of the pad are soft and yielding and it is worn with comfort.

Now, having fitted the truss, the care of the case has really only just begun. The child must be kept under observation, and the truss changed in shape and size as it grows. It should at first be seen at least once a week, and not allowed to pass entirely from care *until it is cured*.

In case of whooping-cough or severe bronchitis supervening, it is advisable to increase the truss pressure temporarily, but otherwise after the first three months it is well, if the hernia never protrudes, to begin to reduce the pressure.

One year is the shortest period that a truss should be worn; if, however, the case has been one of undoubted congenital hernia, it is best to prolong the period of wearing the truss to two years. It should never be removed by the mother except for purposes of cleanliness, and this should

be while the child is quiet and in the recumbent position. Absolute cleanliness must be insisted upon; if the skin be kept clean and dry, it will tolerate pretty strong pressure without abrasion.

Hydro-salpinx and Pyo-salpinx—Diagnostic and Therapeutic Experience.

Landau (*Contribl. f. Gyn.—N. Y. Med. Jour.*) says tumors of the Fallopian tubes are much more frequent than was formerly admitted, or even now admitted by many. They are frequently mistaken for para-metritis, peri-metritis, metritis, and solid or cystic tumors of the uterus or ovaries, and are actually more frequent than they used to be. As causes may be mentioned, not only gonorrhea, infection during or after abortion or parturition, but also too much interference by the gynecologist, consisting in manipulations of the cervix, intra-uterine injections, curetting and cauterization. Infection may take place even though the gynecologist's treatment has been thoroughly proper, occurring perhaps in the course of the healing process, just as epididymitis may follow injections of the urethra.

Our diagnostic knowledge has been derived from the practice of abdominal section and improved methods of examination. The ordinary directions for ascertaining the shape, size and mobility of the tubes are seldom available. The clinical history may show nothing that is characteristic.

Tubal colic is a sign which may be of service.

There are two useful signs for determining hydro-salpinx; one is the characteristic location, the other a feeling which suggests an air-cushion in the palpation of the tube and uterus; but these signs are not available if the uterus is fixed, if the volume of the fluid in the tube is small, and if its walls are thickened. If palpation yields a sensation comparable to a feeling of feathers, it may be considered pathognomonic of hydro-salpinx. It enables one to exclude other tumors at the sides of and posterior to the uterus.

Fluctuation may not be appreciable in a hydro-salpinx owing to the hardness of the sac, and it is not always possible to determine whether the hydro salpinx involves one or both tubes, until the sac is opened. The tubes may be so stretched or conglomerated behind the uterus as to suggest only a single organ. There is no value in the advice to

follow with gentle touch the course of the tube in making a diagnosis of hydro-salpinx. The diagnosis may be completed in some cases by expressing some of the contents of the tube through the uterus into the vagina.

Pyo-salpinx is usually double. If it is single, a hydro-salpinx will usually be found on the other side. The pyo-salpinx may have the shape of a coil of intestine, of a sausage, etc.; there is no soft, feathery feeling as in hydro-salpinx, the walls being thickened and the adhesions removing any perceptible condition of elasticity or contractility.

If the ovaries can be felt by the side of the tumors, the diagnosis will vary between pyo-salpinx and fibroid of the uterus. If there are tubo-ovarian abscesses, abscesses in the broad ligament or in the ovary, a diagnosis can not be made by palpation. The distinction between hydro-salpinx or pyo-salpinx and tubu-pregnancy, is not difficult if the customary signs of pregnancy are present. Ectopic gestation in a horn of a uterus bi-cornis may be recognized by the sharp location of the horn. In pregnancy, in a horn of a uterus bi-cornis unicollis, or a uterus septus bi-collis, the development of the impregnated portion anteriorly may suffice for a diagnosis. Hematometra in the rudimentary horn of a uterus bi-cornis may be recognized by the pains which recur at the menstrual periods and also by the hemorrhage at such times. The consistence of an impregnated tube is characteristic and excludes pyo-salpinx. The former is soft, succulent, and changeable in character, owing to the contractions which are excited by the examining hand. Effusions of blood, exudates and abscesses are without shape, and diffuse. Myomata can not be distinguished from pyo-salpinx by palpation. If a diagnosis by palpation is impossible, on account of very fat abdominal walls or very tense abdominal muscles, to solve the difficulty, puncture may be made through the vagina or through the abdominal walls, and will enable one to say whether a tumor is solid or contains fluid.

If fluid is obtained, the microscopic appearance will vary according as the tumor is a colloid, dermoid, fibrocyst, hematocele, etc. Boiling the fluid will enable one to determine the presence of ecchinococcus and parovarian cysts. The naked eye will enable one to decide the presence of pus in the fluid, and the volume of albumen or chlorides will decide as to the inflammatory or dropsical condition of the tube. The microscope will assist by showing the hooklets

of the ecchinococcus, crystals of cholesterin or hematoidin, pus-corpuscles, etc. Puncture will also enable one to decide this or that method of treatment.

Treatment.—In the past, tubal tumors have seldom been recognized in the living, owing to deficient knowledge of diagnostic symptoms and defective methods of examination. Even if recognized they were not removed, owing to imperfect methods of operation. Now the rule is to remove all abdominal tumors, and the good results which have been obtained have tended to increase our knowledge of tubal tumors.

The diagnosis of a tubal tumor does not yet imply salpingectomy and castration, as the discovery of an ovarian tumor or cancer would. There should be clear indications as to the necessity for an operation.

Hydro-salpinx may be cured spontaneously, and may be treated by mechanical or surgical means. The former will consist in relieving a displaced uterus and so correcting the position of the tube. This may lead to the evacuation of the tubal tumor through the uterus. Or massage may be used to advantage in some cases associated with baths and irrigations *per vaginam*. It is dangerous to treat this condition by sounding the tube, more particularly if a stiff sound is used, and only this form would be efficient. Dilation of the uterus is likewise not free from danger; it may result in producing a pyo-salpinx.

Surgical means are indicated when mechanical ones fail, and they should aim to treat the tube and ovary as far as possible by conservative measures. Puncture may be employed through the vagina with antiseptic precautions, the tumor being pushed downward as far as possible through the abdominal walls. Care must, of course, be taken to avoid injuring the abdominal viscera. The puncture may be simply exploratory, it may be followed by irrigation of the cavity with a three-per-cent. solution of carbolic acid, or it may be followed by an injection of iodine into the sac. A canula should not be left in the sac to excite suppuration. If the tumor is not perfectly accessible through the vaginal vault, it should not be punctured. The operation should not be performed through the abdominal wall. Incision may be practiced through the vagina for certain cases of hydro-salpinx, if puncture does not suffice.

Puncture has been performed in many instances by the author, and never with bad results. Errors of diagnosis,

before puncture, were revealed when the operation was performed in cases of ovarian, echinococcal and par-ovarian cysts, and in tubal pregnancies.

In cases of pyo-salpinx it may be remembered that a spontaneous cure sometimes takes place, that radical treatment is not always demanded, and that the course of many cases is without prominent symptoms. Mechanical treatment is not suitable, neither is puncture, in so far as the latter is intended as a curative measure. Incision and excision alone are indicated, the former for single, the latter for multiple pus sacs. Incision may be made through the vagina, the abdominal wall, or both, according to the conditions, while incision may be made through the vaginal vault without the aid of a speculum or dragging forward of the uterus.

If the pyo-salpinx is adherent at the vaginal vault, the peritoneum need not be opened. If there is a tumor in each side of the pelvis, an abdominal operation is to be preferred. Should there be much hemorrhage, it may usually be checked with torsion forceps. A "T" drainage-tube should be left in the sac for eight or ten days, and iodoform gauze may be packed around it for twenty-four hours should the hemorrhage be obstinate. Vaginal douches should be given daily, and the patient will usually be able to sit up in eight days. The incision will usually heal readily. If there is retention of the sac contents, the wound should be dilated with the finger. The immediate and remote results of this operation are, as a rule, very satisfactory.

If the pus sacs are near the abdominal wall, the incision is made through the latter, and if the sacs are not adherent, they are evacuated and stitched to the abdominal wall. The proper site for the abdominal incision will depend upon the position and size of the sac and its relation to the intestine. A counter-opening through the vagina for drainage will only be required in case of large tumors.

In exceptional cases in which attachments to intestines prevent one from bringing the tumor forward and stitching the sac to the abdominal wall, an abdominal incision may first be made, then an incision through the vaginal vault, then the tumor may be steadied with the hand in Douglas's space, while with the other an opening may be made in it through the vagina. Drainage in such cases should be made *per vaginam*; irrigation is generally not indicated.

If an operation is indicated rather for the relief of extensive adhesions than to remove accumulations of pus, excision

alone should be practiced. If the ovaries are not diseased, they should not be removed, the diseased tubes only being excised; as a rule, however, the ovaries and the tubes must be removed simultaneously. These operations may prove very difficult; Trendelenburg's posture may facilitate them. In removing the diseased tubes through an abdominal incision, their contents are frequently diffused in the abdominal cavity. This necessitates the most careful and thorough toilet possible of the abdominal cavity. Resection of the tube and attachment to the abdominal wall has been limited, in the author's experience, to very large tumors or to those which were irremovably joined to the intestine. Resection of a diseased portion of a tube, and adjustment of the remainder so as to favor subsequent impregnation—as practiced by Schroder, Martin and Skutsch—offers also the danger of subsequent infection through the uterus.

The results of these operations upon the tubes have been good and permanent in the great majority of cases; but in some cases there has been trouble from ventral hernia, or from nervous, psychical or trophic changes, which have made the patients worse than they were before the operation.

The Necessity for Immediate Surgical Intervention in Lacerations of the Perineum.

The misfortune which has just happened to an unfortunate practitioner, who was mulcted damages to the amount of nine hundred dollars and costs by the Superior Court for neglecting a lacerated perineum, should be a lesson to every accoucheur in this country. It was shown that the laceration was complete, extending into the rectum, and had been followed by procidentia of the uterus and other distressing accidents.

The duty of attending to all extensive lacerations of the perineum at the time when the lesions are fresh is insisted upon by the best obstetrical writers, and it is certainly the practice of the most successful obstetricians in this country to immediately put in three or more deep stitches, thus approximating and keeping in apposition the lacerated parts till union takes place. It matters little what material is used for the suture; some use chromacized catgut, and make a deep continuous suture, and certainly catgut has in many

instances proved to be sufficiently enduring ; others prefer silk, others silver wire. Every physician has, or ought to have, in his pocket surgical-case ligatures and curved needles, and if a sufficiency of interrupted sutures are inserted immediately after confinement, the old-fashioned quilt suture may well be dispensed with. It will not always be necessary to give the patient ether in order to insert the stitches, though some nervous and susceptible subjects may require it. It is true that after a long and difficult confinement case, the medical attendant is generally tired out and shrinks from another operation, especially where anæsthesia is required, but he must muster strength and nerve for the occasion if he would escape liability to a suit for malpractice ; and if he inserts a few stitches he will save himself from the imputation of ignorance or carelessness. Modern juries have not the name of being very tender to the feelings, reputation or pockets of physicians, and it goes without saying that the most vigilant and attentive will be the least likely to be "caught napping."

There are one or two errors that should be cleared away, lest they should be subterfuges for the careless. The one is that tying the knees of the patient together will answer the same end as sutures. "Only a very credulous person," says Lusk, "really believes that he has witnessed union by first intention in extensive ruptures as the result of tying the knees together, and enjoining rest upon the side. The action of the transversi-perinei muscles tends to draw the torn surface apart. Moreover, the necessity of separating the knees in passing urine, and to enable the nurse to clean the genitalia, makes it impossible to keep them in contact for any lengthened period."

The other mistaken notion is that primary perineorrhaphy rarely succeeds, "that the perineum is not merely torn but is contused and mangled, and that the previously œdematous and infiltrated tissues are predisposed to gangrene, and consequently are in the worst possible condition for immediate union." (Charpentier.) Moreover, it is said that the lochial discharge will always be an obstacle to union by first intention. According to the experience of very many who have tried the immediate operation, and who have seldom or never failed to obtain good union, if due pains toward cleanliness and antisepsis are taken, no such unfavorable result as Charpentier points out need ever be feared. Certainly, Charpentier's American editor warmly favors the immediate repair

of any laceration beyond the first degree, for the reason that thus a possible entrance site for septic matter is prevented, and also because the operation is a simple affair after delivery, and more extensive and complicated the longer we wait. He recommends that in case of laceration to the second degree only one deep silk or wire suture should be used; if the rent be deeper, three to five will be needed. In any event the patient should be placed on her side, a wad of absorbent cotton inserted into the vagina to catch the discharges, the wound carefully washed and trimmed of jagged shreds, and then, guided by the finger in the rectum, the suture is passed deeply around, at one-half inch from the margins. The line of suture should be dusted with iodoform, and a narrow strip of cotton laid along the perineum and the posterior vaginal wall. The after treatment will consist in dusting with iodoform twice daily, and replacing the strip of cotton by a fresh piece till the sixth or seventh day, when the sutures may be removed.—*Boston Med. and Surg. Journal*.

Treatment of Malignant Neoplasms not Amenable to Operation.

Prof. v. Mosetig-Moorhof, of Vienna, states (*Wiener Med. Presse* 6, '91, as quoted by *Pittsburg Med. Rev.*, May, 1891) that he had employed all recommended remedies for years without noteworthy result. But he kept in mind that the pathogenic cell-elements possess decidedly inferior biological potency to the healthy tissue elements—pointing to the possibility of making active warfare upon the neoplasm without affecting the surrounding healthy tissue. Proliferation of the pathological cell-elements, upon which the growth of the neoplasm depends, occurs from the nucleus of the mass. Hence, Mosetig thought, to concentrate treatment upon the proliferating nucleus would arrest the process, and even induce retrograde metamorphosis. This led him to stain the neoplastic tissue—an easy task—by filling it with aniline dye freed from arsenic. His first experimental case was a man, age fifty, with an orange-sized, round-cell sarcoma, in the inguinal region, which several prominent Vienna surgeons pronounced unfit for operation. Mosetig injected one gram of a one per cent. solution of aniline trichlorate into the sarcomatous mass. After eight weeks' treatment, the tumor diminished to size of a hickory-nut, with a healthy cicatrix

at the site of the ulcer, and the patient was discharged decidedly improved. A year later, the man died of pneumonia, without even a sign of recurrence of the growth. Mosetig employed aniline trichlorate in three other cases, but was obliged to discontinue its use because of unpleasant effect in other directions.

A year ago, two new dyes—methyl-violet and pyoktanin—were introduced, and said to be perfectly harmless by Prof. Stilling. Mosetig selected a lady, age sixty, with a sarcoma of inferior maxilla, size of a fist, filling the oral cavity, and forcing the tongue up against the hard palate, so that she could neither speak nor swallow. The growth was injected with methyl-violet solution 1:500, which was increased to 1:300. In all, thirty-five injections were given of from three to six grams of solution at each sitting. Then the growth had shrunken so that only a portion of the interosseous enlargement remained, and the patient was free of suffering. Up to this writing, no malignant disposition is manifest.

Five other cases—cysto-sarcoma of sterno-clavicular joint, papilloma of urinary bladder, sarcoma of peritoneum and two carcinomata of cervical glands—have all done equally well with methyl-violet injections—all being decidedly improved, with possible absolute cure in the near future. Tumors not suppurating do not degenerate, but simply shrink together in retrogressive metamorphosis; while such as are ulcerated and discharging pus for a time suppurate more freely, after which, with some diminution in size, they cicatrize rapidly.

The injections are repeated every two or three days, and made under strict aseptic precautions. Thus far, Mosetig has employed solutions of the strength of 1:1000, 1:500, 1:300; and he is of opinion that much stronger solutions may be used without danger.—*Va. Med. Monthly.*

SEXUAL DEBILITY.—A prescription containing capsicum is of much value in sexual debility. The following has not only proven to be of great value in sexual weakness, but is also a fine appetizing tonic, being a favorite prescription with all who have tried it:

R	Tinct. capsici,	3 ij.
	Tinct. nucis vom.,	3 ij.
	Celerina,	3iijss.
M.	Sig.: Teaspoonful in water before meals.	

Gonorrhœa and its Rational Treatment.

BY GEORGE WILËY BROOME, M.D.

Read before the St. Louis Medical Society at St. Louis, June 13, 1891.

I propose to present this subject briefly summarized in the following propositions:

1. No valid argument can to-day be urged against the generally accepted fact that the pus resulting from certain urethral inflammations is capable, if duly applied, of producing similiar inflammations in another person. This being granted, the natural inference and logical conclusion must be that some specific virus is incorporated in the experimental pus. The only obstacle to the universal adoption of this conclusion is, that some forms of urethral supuration do not appear to be contagious; this may be true, and yet the doctrine enunciated proves that specific inflammations, under favorable circumstances, will inevitably produce their like. Non-specific pus on sound skin, even if inoculated, appears to be innocuous, but if the pus of gonorrhœa is applied to the conjunctiva, a very severe form of inflammation is promptly produced; and the pus generated by this inflammation possesses apparently the same contagious properties. Notwithstanding this peculiarity, the virus of gonorrhœa does not always enter the circulation, the affection usually remaining local. Experimental researches render it almost certain that the specific virus of gonorrhœa consists of a micrococcus; *i. e.*, gonococcus. It is even stated that this organism has been found in the secondary joint-inflammations, as well as at the site of the original lesion; these facts, therefore, forbid us to regard gonorrhœa as a purely local affection. Pathogenic microbes, by their amœbic character, migrate through the walls of the urethral membrane and enter the blood. The disease is, to that extent, infective and constitutional. Whilst the constitutional effects, beyond fever, are not notable, yet the fact that such constitutional symptoms are produced, is evidence sufficient to prove that gonococci do pass beyond the walls of the urethra.

2. In contemplating a genuine case of gonorrhœa, its pathology must be regarded as the effect of the invasion of specific micro-organisms—the suppurative inflammation being caused by the action of the gonococci, the pus-

microbes, upon the mucous surface of the urethra, and the transformation of leucocytes and embryonal cells into pus-corpuscles—by the same cause. The brilliant results which have been obtained by the antiseptic treatment of wounds render it exceedingly probable that all suppurating diseases are caused by living micro-organisms. In other words, a true inflammation is always caused by the presence of one or more kinds of pathogenic microbes. In gonorrhœal inflammation the presence of a specific micro-organism has been demonstrated, and its etiological relations established by cultivation and inoculation experiments.

3. The action of pathogenic bacteria on the tissues is two-fold. In the first place, they abstract from the surrounding structures a part of their essential constituents; and, in the second place, they produce the decomposition of albuminoid substances; from whence results the production of ammonia and its derivatives. This condition, together with an inability on the part of the inflamed urethra to expel *all* of the urine voided from the bladder, and the chemical changes taking place in the detained urine tend to macerate, as it were, the urethral mucous membrane. In consequence of this pathological process there results a thickening of the mucous membrane by infiltration into the submucous tissue; which, if abundant, subsequently gives rise to cicatricial contraction and the formation of strictures.

4. Basing the treatment of a genuine case of specific urethritis upon the pathology thus briefly outlined, the indications for treatment must, of course, be followed strictly, and, indeed, solely on antiseptic methods.

5. Instead of attempting, at the outset of treatment, to render the urine of the patient alkaline, as was the practice formerly, quite the opposite course is recommended; viz.: to irrigate the urethra and bladder with an acid. This is done by means of Lindenschmidt's urethral irrigator and irrigating dilator, attached to a syringe capable of throwing a continuous solution of benzoic acid. Besides bathing the entire penis in hot water several times daily, the patient is subjected to no change of treatment until after the lapse of several days; then the urethra is insufflated with about five grains of the pure substance of methyl-violet—which substance appears to penetrate the urethral walls, and seizing upon the deeply infiltrated specific micro-organisms, eventually destroys them.

Many cases, of the acute form of the disease, have been promptly cured by these simple measures.

6. In the chronic form of the disease, the bladder should be frequently irrigated with a warm solution of benzoic acid; and if the posterior portion of the urethra is found to be irritable, ten to twenty drops of a twenty-five per cent. solution of nitrate of silver in boro-glyceride is applied to the affected parts; and repeated, if necessary, at intervals of several days. But the suggestion carrying with it the greatest value relative to the treatment of deep urethral morbid processes following either gonorrhœal inflammation, masturbation, excessive sexual excitement, or any other cause which has brought about functional impairment of the membranous urethra, is that relating to the effect of decomposed urine, which has been retained in the bulbous portion, in consequence of its inability to expel all that is voided through it at each act of micturition.

I am, perhaps, in a position to state with some considerable degree of confidence that some cases in which no other disease is present, than simply an inelastic urethra, and where the deep mucous membrane has undergone the maceration described, may present all the phase more or less neurotic, and yet be completely restored by only overcoming this one, apparently trivial, condition.

If this fact has ever before been noted and published, it has escaped my observation.

I have personal knowledge of several persons thus afflicted who have passed through the hands of many physicians, surgeons and many of the specialists.

The cases were diagnosticated as follows: One spermatorrhœa and spermatophobia; another, nervous dyspepsia; another, gleet; another, locomotor ataxia; another, sexual neurasthenia; another, cerebral softening. None of the cases, which were thus diagnosed, and subsequently treated by me for the conditions thus described, elicited the virile reflex (a phenomenon which has been given wide publicity of late), either after or before recovery; although the sexual appetite was never entirely absent, and during the treatment grew stronger with the patient's improvement; hence I have been led to distrust the value of that discovery, as a diagnostic sign; or at all events, I do not think the virile reflex can be regarded uniformly as a reliable and constant test in this class of cases.

There are few morbid conditions, however, which are so trying to the patients, or so embarrassing to the attending surgeon, as the cases ordinarily designated the genito-urinary neuroses.

Physicians, we doubt not, are more often consulted regarding functional nervous derangements of the genito-urinary tract, than for the actual disease upon which they depend; and in the event the *locus invasionis* is not readily disclosed, one of the reflex neuroses is conveniently substituted, and the patient, already neurotic, feels greatly relieved, for the time being.

Chordee, the painful concomitant in gonorrhœa, a pathological condition which I think demonstrates the presence of the specific microbial poison outside of the urethra and in the body of the penis, is surely produced by the process now described as phagocytosis. The corpus cavernosum is rendered, at certain points, inextensible in consequence of the infiltration of leucocytes, etc., a condition brought about by the presence of gonococci, which have migrated through the walls of the urethra and colonized in some of the trabecular spaces in the cavernous body. I am thoroughly impressed with the belief that this is the true pathology of chordee; and that in all cases of gonorrhœa the inflammatory infiltration of the disease, together with the local focus, is beyond the reach of any of the ordinary therapeutic agents applied by the injection methods heretofore pursued. My own conclusion, after very extensive observation, is, that we have never really succeeded in curing gonorrhœa alone and independent of the action of leucocytes and other cells in the process, designated by Metschnikoff as phagocytic; *i. e.*, removing dead material resulting from inflammation and the destruction or digestion of pathogenic micro-organisms. I believe that urethral injections, as heretofore used, accomplish nothing, more than simply to act as detergents to the urethral mucous membrane only.

The remedy which I propose is applied in the form of a powder; besides exerting a definite germicidal action, it passes at once through the walls of the urethra and permeates completely all of the tissues of the penile organ. I have observed no hurtful effects whatever to follow even the application of the pure substance of methyl-violet. The treatment is essentially rational, and certainly produces exceedingly satisfactory results.—*Weekly Med. Review.*

Translations.

Medical Therapeutics.

On the Treatment of the Chronic Affections of the Great Intestine, and in Particular of Cancer of the Rectum by Intestinal Antiseptics.

BY DOCTOR DUJARDIN-BEAUMETZ,

A Member of the Academy of Medicine, Physician of the Hospital Cochin.

Translated for the CINCINNATI MEDICAL NEWS from the *Bulletin General de Therapeutique*, Paris, June 30, 1891, by Mon. E. A. Quetin, Juge de Paix, Tonnerre, France.

For several years I have been able to observe a certain number of chronic affections of the great intestine, and in particular of cancers of the rectum, which have been much ameliorated by the use of intestinal antiseptics, and those facts seemed to me interesting and decisive enough that I should desire to present them to the readers of the *Bulletin de Therapeutique*.

Of late, surgery has proposed a series of operations of more or less gravity in order to remedy the inconveniences of cancer of the rectum, and as a sequel of the incision of the rectum advised by Verneuil, the ablation has been proposed of the contaminated parts of that organ, an ablation made easy by the resection of the sacrum. Our colleague Routier has cited some very interesting observations relating to that order of facts.

I believe that, without the interference of surgery, results almost as good may be obtained by means of intestinal antisepsy. During the last three years, I have been attending to patients who are manifestly affected with cancer of the rectum. One case is that of a man who was presented to me by Dr. Dubuc; two other cases are those of women affected also with cancer. With all those patients, the rectal touch, the issue of ichorous matter and the phenomena of intestinal occlusion allowed no doubts as to the existence of cancer; and yet, thanks to a rigorous antisepsy, I was able to obtain such an amelioration that those patients have gained flesh and to-day are in a state of health tolerably satisfactory.

I believe, indeed, that most cancers of the rectum, by their slow evolution, approximate certain uterine neoplasies,

that may exist for years without endangering the life of patients, and that will cause death only through obliteration of the ureters and the grave consequences resulting from it. Thus also with cancer of the rectum; when we can remedy the inconveniences resulting from obstruction by collected matter, when we can also reduce the accidents brought by stercoramia, we succeed in maintaining a general state of health sufficient to allow the patient an increase in weight with a mode of life that is relatively satisfactory.

I bring into action means of three kinds: first, local means; then antiseptic medicaments introduced through the mouth; also purgatives; lastly an alimentary regimen.

As to local means, I desire rectal irrigations. [Here comes a description of the injecting apparatus and mode of operating.] The solution used is that of naphtol, the most soluble and least toxical, and my formula for those solutions is:

R Naphtol, 5 grammes.

In twenty doses, one dose for one litre of water.

I generally introduce from one litre to one litre and a half of the solution and even two litres. It is not necessary the patients should keep those injections which they may eject almost immediately.

As to medicines introduced through the mouth, I use antiseptics and purgatives. As an antiseptic, I recommend very particularly salol; as I very often declared it, salol is for me, up to this day, the best of intestinal antiseptics, and I ordinarily employ the following formula:

R	Salol,	} āā 10 grammes.
	Salicylate of Bismuth,	
	Bicarbonate of Soda,	

In thirty wafers; one before breakfast and one before dinner.

But those mixtures may be varied and the quantity of salol increased to three or four grammes per day.

Besides, I keep the bowels loose. That is the difficult point, for in spite of all the attention we apply to this treatment, there always is some intestinal obstruction, and every four or five days the patients will experience colics and a breaking loose of the bowels. The preparations I use ordinarily are purgative waters, or laxative powders, or cascara, endeavoring to appropriate the laxative with the tolerance of the digestive organ of the patient. But it is necessary to provoke at least one stool every day.

Finally, as a complement to that treatment, I prescribe a vegetable regimen. It consists exclusively of milk, eggs, fecula, green vegetables and fruit. . . .

Such are the outlines of the treatment I brought into action in cases of cancer of the rectum. Could we expect to be so successful in all cases? I do not think so. However, whenever the cancer shall not determine a very considerable intestinal contraction and shall permit sufficiently the passage of stools, I believe that some very satisfactory results may be obtained from the means I am recommending.

But this same method is also applicable to other affections, and I have obtained excellent effects in the treatment of chronic inflammations of the great intestine, and especially in colitis of various forms.

Surgical Therapeutics—Radical Cure for Ozœna.

BY DR. MICHEL CHRISTOVITCH (OF SALONIQUE).

Every rational treatment ought to be based on pathological anatomy.

Ozœna is considered as an incurable disease, simply because its treatment was exclusively symptomatic, struggling against the stagnation and fetidness of matters by means of irrigations, of antiseptic pulverizations, etc. . . . the disease being considered as originating from a strumous or specific constitutional general state.

It was only three years ago that the French Society of Laryngology, in Paris, discussed at length the nature of ozœna, and came to the conclusion that it is merely local and of a microbial origin.

Hajet has found, in the secretions of ozœna, a coccus very similar to the capsulated coccus of Friedlander. That bacillus decomposes organic matters; then fatty acids are developed producing the fetidness characteristic of ozœna. The microbe resides in the glands of the nasal mucous membrane, which are media propitious for the culture of that micro-organism.

Ozœna, therefore, may be cured when the glands of the nasal mucous membrane disappear either by the effects of the disease itself, or through an operation.

Ozœna is only the characteristic symptom of the disease called chronic atrophic rhinitis.

[Here comes a description of the pathognomonic signs of the affection.]

That atrophic rhinitis will develop better with a person of a weak or strumous constitution, but well-constituted individuals are not exempt.

Basing myself on the anatomo-pathological lesions, I find that the most rational treatment is by destroying the focuses of microbes—that is, the degenerated mucous glands—and, according to the more or less advanced state of the affection the surgical treatment shall be more or less energetic. At the start of the affection we should limit ourselves to the cauterization of the deep and superior parts of the nostrils with the galvano-cautery, and repeat it according to circumstances. When the lesions of the atrophic rhinitis are already advanced, it is absolutely necessary to practice the real operation in destroying, by removal, all the degenerated mucous glands covering the *nares internæ* up to the naso-pharyngeal region. Then, in order to complete the operation, we cauterize with the galvano-cautery.

Process of Operating.—On the day preceding the operation, we make abundant alkaline and antiseptic irrigations of the nostrils, which means are insufficient for a complete antisepsy and for removing the concrete matters, which are very adhesive, especially toward the superior anfractuosités. We render the field of operation less sensitive, by means of pads of hydrophile cotton dipped in a concentrated solution of cocaine, which are introduced high enough and deeply.

After ten minutes, we withdraw the pads and we proceed with the operation. With a scraper elongated and of small dimension, so that it may be easily introduced, even into the small anfractuosités, we scrape and empty effectually and rapidly all the degenerated nasal mucous membrane covered with concrete masses, even to the naso-pharyngeal region, and we continue scraping in this way until the fetidness has completely disappeared. After the scraping we immediately make the cauterization of the profound parts that have escaped scraping. The hemorrhage, that is considerable, stops rapidly by the introduction, into the nostrils, of the pads of hydrophile cotton in a large quantity.

One single operation well made suffices, in most cases, for the complete cure.

That operation presents no inconvenience, except some pains in the ears.

[Here comes the details of three successful operations.]

In one case, the consecutive treatment consisted simply in snuffing powder of iodoform mingled with powder of boric acid.

In conclusion, the efficacious treatment should be local and, in the second place, general. Ozœna should be treated early, not only in order to stop the progress of the affection, but also in order to prevent the very grievous consequences resulting from the continual inspiration of the nasal putrid matters.

Microscopy.

ON PREPARING TISSUES FOR EXAMINATION.—As not a few young physicians have microscopes who have not received any instructions from a demonstrator in regard to making examinations with the instrument, we quote the following, on preparing tissues for examination, from Prof. Gibbes' work on "Practical Pathology and Morbid Histology," which is noticed among Book Notices of this issue of the MEDICAL NEWS:

"The most essential point in pathological investigations is the proper hardening of the material to be examined, and this must be done gradually, as, if any tissue is placed at once in a strong solution, such as one per cent. chromic acid or absolute alcohol, the elements of which it is composed shrink on the outside and undergo such alterations as to make it impossible to form a correct idea of the pathological change that has taken place. Bad hardening, combined with imperfect histological knowledge, will account for most of the extraordinary fallacies that have been made public of late years.

"French weights and measures are the most simple to use, but the proportions will also be given in English weights when practicable. One gramme is equivalent in weight to one cubic centimetre of water. It will, therefore, be seen how easy it is to make percentage solutions when French weights and measure are used. For example, to make a one per cent. solution, one gramme is weighed out and dissolved in 100 c.c. of water.

"Hardening solutions, as a rule, do not need filtering. The best plan is to make a large quantity at a time.

"CHROMIC ACID MIXTURE.—The most useful hardening agent is a mixture of chromic acid and spirit.

“ Make a solution of chromic acid in water, fifteen grains to the pint, or one gramme to 600 c.c. Ordinary water may be used. Take of this two parts, and ordinary alcohol one part—stir.

“ The material must be cut into small pieces—about half-inch cubes—and a large quantity of fluid used; a wide-mouthed, stoppered bottle holding from six to ten ounces, according to quantity of material, is best; change the fluid at the end of twenty-four hours, and again every third day, and the material will be hardened in from eight to twelve days. This can be easily proved by taking out a piece and feeling it. If allowed to remain too long, it gets brittle. When it is found to be moderately hard, usually after about eight to ten days, pour off the chromic acid mixture and wash well in water for some hours. The water should be changed several times, then place it in dilute spirit made thus: Alcohol two parts—water one part. Let the material be well covered by this dilute spirit.

“ The material should remain in this from twenty-four to thirty-six hours, never longer than three days, and then replace it by pure alcohol, enough to cover the material. It may remain in this for an indefinite time, but it will often be found that the spirit becomes cloudy and full of deposits in a few days. Under such circumstances it is only necessary to change the spirit until it remains clear.

“ In some cases a one-sixth per cent. solution of chromic acid, in other cases a one-tenth per cent., may be employed with advantage. These different strengths are not required for ordinary work, but when special investigations are made it is sometimes better to try the effect of different strengths of the hardening agent to see which gives the best result in that particular case.

“ MULLER'S FLUID.—This is a good hardening mixture, but requires a much longer time, taking weeks to do what the chromic acid mixture will effect in days. It is made thus: Take potass. bichromic, two parts; sodæ sulph. one part; water 100 parts.

“ The solid constituents should be mixed in a mortar, and then the water warmed should be added and stirred. A large quantity should be employed at a time, about ten times the bulk of the tissue.

“ The advantage of this mixture is that large pieces can be hardened in it, and it does not require changing after the first week or two; but it will require from five to seven

weeks, according to size, to harden anything in it. When it becomes cloudy it should be changed. The material, when hardened, should be well washed and then placed in dilute spirit as recommended after hardening in the chromic acid mixture.

“**DILUTE SPIRIT.**—Many tissues can be hardened in spirit alone if they are placed in dilute spirit at first, so that the elements of which they are composed are not shrunk. This process is also used after hardening by any of the others. It is made by adding one part of water to two parts of alcohol. The material to be hardened should not be left in this mixture more than from twenty-four to forty-eight hours. It is then transferred to pure spirit, and after remaining in it from three to five days, it is ready for cutting.

“**BICHROMATE OF POTASH.**—Make a two per cent. solution and keep it on hand, as it is very useful for many tissues that require slow hardening. A solution can be made much more quickly with warm water than cold. This fluid is very useful to place portions of morbid material in on their removal from the body in the post-mortem room. They can be afterwards transferred to the chromic acid mixture for more rapid hardening. This solution requires from three to seven weeks to harden, according to the size of the specimen, and the frequency with which the fluid is changed.

“**BICHROMATE OF AMMONIA.**—A two per cent. solution is used in precisely the same manner as the former, and is applicable to the same tissues.

“When any tissue is obtained which it is thought desirable to examine for micro-organisms, a small portion should be removed and placed at once in absolute alcohol. The remainder can then be hardened more slowly, so that the natural condition of the element is not altered. Material hardened in chromic acid is not good for bacteriological research, as the acid interferes with the staining of the organisms.

“**SILVER NITRATE.**—Nitrate of silver possesses the property of forming a compound with the intercellular cement between the cells of serous membranes and other parts. For this purpose it is very useful for demonstrating the existence of squamous epithelium in such situations as the surface of the mesentery, or the lining of blood-vessels. A half per cent. solution is used, made by dissolving one gramme of the salt in 200 c.c. of distilled water.

"In the case of the mesentery, it is merely necessary to immerse it for two or three minutes in the solution, and then expose it to the light in distilled water for two or three days. It is necessary to change the water several times.

"OSMIC ACID.—This can be procured as a one per cent. solution in water, and it is then diluted to various strengths as required. It blackens fat and the medullary sheath of nerves. A piece of mesentery placed in a weak solution for half an hour will show the fat cells lying along the course of the blood-cells, as round black bodies. It is also used for hardening the internal ear.

"It is quite as important that pathological specimens should be properly hardened as normal tissues, but how seldom is this done. In the first place, it is difficult to get the morbid tissues fresh enough, and yet they are often put on one side, or at most placed in the lump in a small quantity of spirit and water, and it is expected that good sections can then be prepared from them. Nothing is more erroneous than this idea. The subject has been dead probably twenty-four hours at least when the post-mortem is made, often longer, and in summer especially this means utter ruin to many organs. It is important, therefore, that these organs should be put in the hardening medium at once, when as fresh as possible. For this purpose a wide-mouthed bottle of Muller's fluid should be taken to every post-mortem examination, and small pieces of any organ, that may seem interesting on any account, may be put in. A small paper label may be tied on, and they can be separated afterward.

"They may with advantage be allowed to remain in the Muller's fluid for a week. They are then cut into small pieces and placed in the chromic acid mixture in separate bottles duly labeled. The same remarks apply to tissue removed by operation. This should be placed in the hardening fluid at once, *without more handling than necessary.*"

DR. VIRCHOW DENOUNCES KOCHISM.—The lower house of the Prussian Diet on May 9th voted 165,000 marks for Prof. Koch's institute. Prof. Virchow opposed the grant, and denounced Kochism, claiming that it proved a failure. He warned the doctors who were using the lymph that they ran a great risk if they persisted in treating their patients with the alleged remedy.—*Med. Record.*

Gleanings.

HOT SAND-BAG.—A writer in the *Nightingale* says: "The sand-bag is invaluable in the sick-room. Get some clean, fine sand; dry it thoroughly in a kettle on the stove; make a bag of flannel about eight inches square; fill it with dry sand; sew the opening carefully; and cover the bag with cotton or linen. This will prevent the sand from sifting out, and will also enable you to heat the bag quickly by placing it in the oven or on top of the stove. The sand holds the heat for a long time, and the bag can be tucked up to the back without hurting the invalid. It is a good plan to make two or three of the bags and keep them on hand ready for use at any time when needed."

CHOLERA INFANTUM—EMACIATION OF CHILDREN.—Due to improper diet and excessive heat. Observe due precaution as to cleanliness, pure air, clean and dry bedding, etc. Allow plenty of pure cold water with five to twenty drops of brandy in it (at times). Have the child taken to the seaside, or to the parks, boat-riding, etc. Get away, if possible, from the overheated, crowded city. If the mother's milk disagrees, the best possible substitute is a wet-nurse, and in the event of not being able to procure one, the giving of one teaspoonful soluble dextrin and one teaspoonful of a good condensed milk (rich in fat, with a small quantity of cane sugar and a good proportion of water), ten drops of proteinol to forty teaspoonfuls of water. As the child gets better lessen the amount of water. This should be given a child under three months and as often as the exigencies of the case demand.

To make soluble dextrin take one quart good wheat flour, pack it tightly in a bleached twilled muslin bag, tie securely and throw into a large kettle of boiling water. Keep it there for at least fifteen hours; during all this time the water must be kept boiling; when it, by evaporation, runs low, boiling water must be added. After removing, place the bag aside, for at least eight hours, so it can dry. Then remove the bag and peel off from the surface and throw away the thin rind of dough, and with a grater grate down the hard, dry, chalk-like mass (soluble dextrin) into a powder. Rub this into a paste with a little of the condensed milk and water that has been previously mixed, then add the ten drops

proteinol and the balance of the condensed milk and water, incorporating thoroughly.

But for a stimulant, muscle and bone food, proteinol in teaspoonful doses should be given separately every three hours. The prompt and continuous administration of proteinol will often save lives seemingly *in extremis*. Great care must be taken to change napkins or diapers as soon as soiled. The wood-wool diapers made by Hartman, of Germany, are antiseptic, absorbent, deodorant, and do not heat and irritate the child as do those ordinarily in use, and their cheapness admits of their immediate destruction, avoiding infection from retained discharges.

FOR CHAPPED, ROUGH OR FISSURED HANDS.—The following formula is claimed by the *Wiener Med. Wochenschrift* to be the most efficacious application in cases of chapped, roughened or fissured hands:

R Tinct. Benzoes, aa $3\frac{1}{4}$.
 Glycerin, 3vijss.
 Lanolin,

M. et fiat unguentum.

Wash the hands in tepid water, then without having dried them, but merely shaking the water off, apply the salve and rub it in, morning and evening. Gloves should be worn during the night.

CURRIER relates a case recently under his care. A young lady, nineteen years of age, applied to him for relief from cystitis. He sounded the bladder and thought he detected evidences of stone. He then opened the bladder through the vagina, and, on introducing his finger, withdrew a hair-pin. The girl denied all knowledge of how it came there. She was not as confiding as a Texas girl was to us many years ago, says the editor of the *Country Doctor*. We removed a cologne bottle from her vagina. She informed us that she "accidentally swallowed it when a child, and was afraid to let it be known, as her parents might make her have it cut out!"

SCIATICA.—

R Tinct. colchici, m $\frac{3}{4}$.
 Tinct. cimicifugæ, m $\frac{3}{4}$.
 Tinct. aconiti, m $\frac{3}{4}$.
 Tinct. belladonnæ, m $\frac{3}{4}$.

M. Sig.: One dose.—*Starr on Nervous Diseases*.

COPPER IN CHLOROSIS.—Luton has recommended the following formula, from the use of which Dr. Liegeois has obtained excellent effects in chlorosis:

R_y Neutral acetate of copper, . . . gr. $\frac{1}{6}$.
 Crystallized phosphate of sodium, . . . gr. $\frac{5}{6}$.
 Liquorice powder,
 Glycerine, aa. q. s.

M. ft. pil. No. 12.

Sig.: One pill immediately before morning and evening meal.—*St. Louis Med. and Surg. Journal*.

METRRORRHAGIA.—When ergotine is badly tolerated by the stomach, the *Rev. Gén. de Clin. et de Thér.* recommends that it be used in the following manner in metrorrhagia:

The bowel having been first evacuated of fecal matter, and the rectum washed out, a teaspoonful of the following is to be mixed with two tablespoonfuls of hot water and injected:

R_y Ergotine, gr. CL.
 Distilled water, 3 ijss.
 Glycerine, 3 vj.
 Salicylic acid, gr. vj.

TONSILLITIS.—Tonsillitis and diphtheria are most successfully treated by Dr. Haberkorn in applying the crystals of salicylic acid dry and direct with a brush twice a day.—*Cent. der Chur.*

WHOOPING-COUGH. —

R_y Powdered belladonna root, . . . gr. $\frac{1}{6}$.
 Dovers' Powder, gr. ss.
 Sublimed sulphur, gr. iv.
 White sugar, gr. x.

M. Sig.: Take in one dose from two to ten times a day, according to age of patient and effect produced.—Germain See, in *Journal de Medecine*.

EPILATORY PASTE.—Unna, in the *Allgemeine Med. Central Zeitung*, gives the following for an epilatory:

R_y Bari sulphur, 3ij ss.
 Amyli pulv.,
 Zinc. oxyd, aa 5i $\frac{1}{4}$.

Enough water should be mixed with this powder to make a stiff paste, which should be spread over the parts where a removal of the hair is desired. The paste dries in about ten

minutes, and then may be lifted off. The skin beneath will be found to be smooth and hairless. The paste will not irritate unless used again the next day over the same spot.

INFANTILE CONSTIPATION.—Bouchut employs the following syrup :

R̄ Podophyllin, gr. j.
 Alcohol, f. ʒjss.
 Syrup althæa, f. ʒjv.

M. Sig.: Dessertspoonful daily.—*Union Medicale*..

LASSAR'S HAIR POMADE.—Ten parts precipitated sulphur, four parts quinine hydrochlorate, two parts pilocarpine, and twenty parts of balsam of Peru, and incorporate enough ox marrow to make 100 parts.—*Ex*.

WARTS.—

R̄ Acid salicylic, gr. xv.
 Alcohol, m xvj.
 Ether, ʒj.
 Collodion, ʒij.

M. Sig.: Apply daily to warts.—*Med. and Surg. Rep*.

TO THOSE WHO WEAR FALSE HAIR.—The English consul at Canton says that 80,000 pounds of human hair have been exported from that city during the past year, and that it comes mainly from those who have died of contagious diseases, mendicants and criminals.—*The Phys. and Surg*.

THE PRACTICE OF MEDICINE IN FRANCE.—A new medical law has passed the French Chamber of Deputies by which no one shall be allowed to practice medicine in France without a diploma of Doctor of Medicine granted by the Government after examinations passed before a state institution of superior medical education.—*Med. News*.

COLD AIR FOR HEMORRHAGE FROM THE LUNGS.—Dr. Tullio, of Naples, an Italian physician, has recently called attention to the fact that hemorrhage from the lungs may be most efficiently relieved by the inhalation of air at a zero temperature. The air is cooled to this temperature by passing through tubes placed in a box filled with broken ice and salt.—*Hall's Jour. of Health*.

A MEDICAL MAN in Rome recently brought to light some interesting specimens of ancient dentistry and artificial teeth in skulls from different Etruscan tombs, dating back as far as six centuries B. C.—*Med. Times*.

Book Notices

PRACTICAL PATHOLOGY AND MORBID HISTOLOGY. By Heneage Gibbes, M.D., Professor of Pathology in the University of Michigan; formerly Lecturer on Normal and Morbid Histology in the Medical School of the Westminster Hospital, London; formerly Curator of the Anatomical Museum, King's College, London. "*Tenax Propositi.*" Illustrated with sixty Photographic Reproductions. 8vo. Pp. 320. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, \$2.75.

This is a very practical work on medical microscopy and should be in the possession of every physician who has a microscope that he does not wish to use as a plaything, but to employ for the purpose of advancing his knowledge of pathology, histology, etc. Great progress has been made in the methods of research during the last twelve or fifteen years; and the medical man who is not familiar with the advances that have been made in these years will find himself greatly embarrassed in his investigations.

Fifteen or twenty years ago a physician considered himself qualified to employ the microscope for investigations after having taken a few lessons on manipulating the instrument; correcting the objectives for variations in the thickness of the glass covers; learning the use of the micrometer; studying the various angles of aperture of object glasses; familiarizing himself with dry and immersion glasses, etc. Examine Beale's microscopical works—"How to Work the Microscope" and "The Microscope in Practical Medicine;" also, Carpenter "On the Revelations of the Microscope." It will be found that these volumes are devoted almost exclusively to giving instructions in regard to the microscope itself—describing and explaining its different parts; illustrating the construction of objectives and eyepieces; showing how magnification is effected by the simple and by the compound microscope. While these works contain a large amount of valuable information that the medical tyro of to-day will find useful, yet they are totally inadequate in their instructions for the wants of medical students at the present time, who are proposing to carry on investigations as to the causes of disease, pathology and histology.

The work of Dr. Gibbes is divided into four parts: Part 1 is devoted to *Practical Pathology*. In this part are chapters as follows: On Preparing Tissues for Examination; on Cutting Sections; on Staining; on Injecting the Vascular System, etc. Part 2 is devoted to *Practical Bacteriology*, and has chapters upon Cultivation Media, Plate Cultivations, Examination of Micro-organisms, Examination of Sputum, etc. Part 3 is devoted to *Morbid Histology*, and has chapters on Inflammation, Hypertrophy, Degeneration, Myxoma, Osteomata, etc. The part contains sixteen chapters, and, of course, we have not the space to give the various subjects treated. Among those discussed, however, besides those we have mentioned, are Acute Miliary Tuberculosis, Pulmonary Phthisis, Fibroid Phthisis, Bacteria, etc. Part 4 is devoted to *Photography with the Microscope*. The four chapters treat of the Use of the Apparatus, Printing Processes, on Photographing Specimens of Diseased Conditions.

The descriptions of the various manipulations are plain and easily understood. With this work the young (also including the middle-aged) physician with a good microscope, of the student's variety, worth about forty dollars, having, in addition to the one-inch and quarter-inch objective (the latter having not less than 100 degrees angle of aperture) accompanying such a stand, a one-tenth or one-twelfth inch immersion lens of 145 degrees angle of aperture, will be prepared to go through all the investigations in the way of demonstrating the discoveries described in the most recent works of the distinguished pathological and histological writers. Heretofore it has been necessary, in order to become familiar with the manipulations of the investigators of the present time, to seek a large city and enter a class of a post-graduate school, or seek the instructions of a private teacher. But in Dr. Gibbes' work all the instruction necessary will be found to become familiar with the most recent methods of research.

The author himself says that his work is intended to be a help to students taking a regular laboratory course, and also to those wishing to form a laboratory at home.

Modern photo-engraving has been brought to such a degree of perfection that the characteristic appearance of tissues under the microscope can be transferred virtually without loss to the pages of a book. The figures contained in this work so exactly represent their originals that the

student can compare his work to them with as much satisfaction as to the real specimens.

In the section on Practical Bacteriology the student will find all the instruction he needs to enable him to study by the microscope the different forms of micro-organisms in their growth, their action on animals by inoculation, and their morphology.

Instructions are given for photographing with the microscope. Says the author: "With the facilities now existing in the matter of cheap apparatus for amateur photography, any individual should be able to make adaptations for the microscope, and thus to secure accurate pictures of specimens made for microscopic investigation. All the formulæ and directions given are of a simple kind."

MINOR SURGERY AND BANDAGING, INCLUDING THE TREATMENT OF FRACTURES AND DISLOCATIONS, TRACHEOTOMY, INTUBATION OF THE LARYNX, LIGATIONS OF ARTERIES, AND AMPUTATIONS. By Henry R. Wharton, M.D., Demonstrator of Surgery and Lecturer on Surgical Diseases of Children in the University of Pennsylvania; Surgeon to the Presbyterian Hospital, the Children's Hospital, etc. With 403 Illustrations. 8vo. Pp. 497. Half Russia. Philadelphia: Lea Brothers & Co. Cincinnati: Robert Clarke & Co. Price, \$3.00.

The title-page describes the scope of the work very well. While we will not assert that the "work fills a long-felt want," we will say that it will be found very useful to both medical students and practicing physicians. It describes in plain language, and in a methodical manner, the various manipulations in surgery, which it is so important for success that they be understood by a practitioner; for a surgeon who handles a bandage awkwardly, and adapts a splint in a bungling manner, though he may make it to subserve the purpose, will be regarded by spectators who witness his manipulations as a person who but poorly understands his business.

The article upon Bandaging is fully illustrated with cuts, mostly taken from photographs. There are also articles upon Intubation of the Larynx, an operation strongly recommended by numerous physicians, if properly performed, but decried if unskillfully done; Tracheotomy; Ligation of Arteries; Amputations, etc.

The work having just been issued, it can be regarded as

fully abreast of the times in all of its instructions. Second course students should study it in a manner as to become as familiar with its teachings as the school-boy is with the rules of his grammar.

TRANSACTIONS OF THE THIRTY-FOURTH ANNUAL SESSION OF THE MEDICAL ASSOCIATION OF MISSOURI, held at Excelsior Springs, Mo., May 19, 1891. 8vo. Pp. 177. Paper. Kansas City: Tiernan Havens Printing Co. 1891.

The work contains the proceedings of the meeting of the Association, a list of members, the President's annual address, the essays, reports and discussions, etc. Quite a number of papers were read, a goodly number of them, as printed in the "Transactions," being interesting and valuable. The officers for 1891 and 1892 are as follows: President, T. F. Prewitt, M.D., St. Louis. Vice-presidents, E. A. Dulin, M.D.; Tinsley Brown, M.D.; Paul Paquin, M.D.; T. E. Potter, M.D.; G. R. Highsmith, M.D. Recording Secretaries, Lyman A. Berger, M.D., Kansas City; Frank R. Fry, M.D., St. Louis. Corresponding Secretary, J. H. Duncan, M.D., Kansas City. Treasurer, C. A. Thompson, M.D., Jefferson City.

Pertle Springs was selected as the next place of meeting of the Association.

REGIONAL ANATOMY IN ITS RELATION TO MEDICINE AND SURGERY. By George McClellan, M.D., Lecturer on Descriptive and Regional Anatomy at the Pennsylvania School of Anatomy; Professor of Anatomy at the Pennsylvania Academy of Fine Arts; Member of the Association of American Anatomists, Academy of Natural Sciences, Academy of Surgery, College of Physicians, etc., of Philadelphia. Illustrated from Photographs taken by the Author of his own Dissections, expressly designed for this work, and Colored by him after Nature. In two volumes. Vol. I. Large quarto. Pp. 436. Cloth. Philadelphia: J. B. Lippincott & Co.

We have received this volume just as the last form of the MEDICAL NEWS is ready to be printed; consequently, while we are able to make room to announce the publication of the first volume of this very valuable work, which has cost the distinguished author much time, great labor and

intense study, we have neither the space nor the time to give it such a review as it deserves—such as would adequately exhibit its merits to our readers. In our next issue we hope to be able to give it proper attention.

We will take time to mention now that the three hundred dissections exhibited in the work were invariably the work of the author's own scalpel, and were all done upon subjects selected as best showing the normal relations of the parts, without pathological change, while such facts as seem valuable regarding the condition or modes of preparation are mentioned in the description of every plate.

THREE THOUSAND QUESTIONS ON MEDICAL SUBJECTS—Arranged for Self-examination. With the Proper References to Standard Works in which the Current Replies will be Found. 24mo. Pp. 144. Cloth. Philadelphia: P. Blakiston & Co.

It is not necessary for us to say that this little work, almost small enough to carry in the vest-pocket, will be found very useful to medical students. It is only by submitting to constant *quizzing* that a student can become familiar with and understand thoroughly the subjects that he is studying. In fact, it frequently happens that he does not know whether or not he has mastered a study until it has been demonstrated to him by a quiz-master.

With this little work the student can quiz himself in every department of medicine—and he can do it as thoroughly as a skillful quiz-master can do it. When we were a student we would have hailed with the greatest pleasure a little work like this one. We advise every medical student to secure a copy of this work and make daily use of it.

PULMONARY CONSUMPTION, A NERVOUS DISEASE: CONSIDERED AS SUCH FROM A PRACTICAL, A CLINICAL AND A THERAPEUTIC STANDPOINT. By Thomas J. Mays, M.D., Professor of Diseases of the Chest in the Philadelphia Polyclinic and College for Graduates in Medicine, Visiting Physician to the Rush Hospital for Consumption of Philadelphia, etc. Detroit: Geo. S. Davis. 12mo. Pp. 185. Paper. Price, 25 cents.

This little work is a number of the "Physician's Leisure Library" series.

The author is of the belief that no theory of the origin of disease can ever earn the right of permanent existence if it falls short in pointing out the path through which the

disease may be prevented or alleviated. The bacillus theory of consumption, he says, has been tried and found wanting. "All who take a calm and impartial retrospect of the whole situation must own that never was an *ignis fatuus* pursued which left more promises broken, and greater anticipations unfulfilled, than the bacillus theory, in so far as it stands related to the therapeutics of this disease."

With the conviction which he holds, he submits in this little work the neurotic theory of pulmonary consumption to the critical consideration of the medical profession, in the belief that it explains most, if not all, the varied and apparently opposing phenomena constantly observed in this disease, and also that it serves the practical purpose of pointing out the means and methods by which it is to be rationally and successfully treated. We recommend to our readers a careful study of the work.

Editorial.

PROPAGATION OF DEFECTIVES.—One of the present editors of the *Lancet and Clinic*, in a recent number of that journal, gave utterance to the following: "Not only would we enforce this, but we would extend it: Do not marry until you have reasonable prospect of supporting a family, and also do not marry when the law of heredity determines the probability that your progeny will be physically and mentally defective. To the State we would say that when this probability becomes a certainty, prohibit the exercise of such potentialities for evil. Recognize, too, the extent of this social contamination. It matters not whether the defect be in physical structure, mental development or moral capacity, the same restriction or prohibition should apply."

Some time ago, in an article which we published on "Vice and Crime," we expressed the belief that mental and moral biases leading to vice and crime, were oftentimes transmitted from parents to children, but in all cases were the result of congenital, abnormal organization of the brain, the organ of the intellectual and emotive forces. In confirmation we referred to the scores of individuals that were daily brought before the Police Court of Cincinnati, and sentenced to the Work-house. These, we showed, were largely the same persons, who spent their lives in revolving in a circuit—from the Police Court to the Work-house, where, after serving their sentences, they would be set at liberty; but, in a few

days, would be again before the Police Court, and again sent to the "Works," and again be at liberty for a brief period. Some of these unfortunates—"defectives"—we stated, were the offspring of "defective parents," but not all, nor even a majority—probably not more than one in ten, if that many.

Mr. Mandsley, in his work on the "Physiology of the Mind," treats in a very interesting manner upon the heredity of vice and crime, but he undoubtedly, in not a few instances, forms conclusions from too few facts. The deductions made from the observations and experiences of one man or a dozen men can not be accepted as laws as regards mental and moral phenomena, however high our opinion of those may be who endeavor to reduce the conduct of men to a science, so that it can be told how certain men will act under certain circumstances. While it is probable that many "defectives" may be pointed out who had a "defective" parent or parents, yet not a few may be shown whose fathers and mothers were of the highest moral character, as also were their previous ancestors. We have in mind an attorney, now deceased, who practiced his profession many years in Cincinnati. His first wife, during her life, never manifested any mental or moral defect. A son by her, after he became a man (we knew him from the time he was twenty-one years of age until he became twenty-three or twenty-four years old), was both a drunkard and a thief, and gave his father a world of trouble by his depredations. His second wife became insane, and had to be placed in the asylum at Columbus, where she was an inmate for several months. A son by this second wife holds a very respectable position as a physician in an Eastern city, and has never exhibited any symptoms of mental aberration. A young man almost twenty years old, who has come under our observation, has manifested decided obliquity of moral character from a very early age; his parents, however, are of the highest moral character, and have made every effort in the way of precept and example to train him aright. The ancestors for generations are known to have been correct people.

But we did not contemplate writing an essay when we began writing. We only contemplated calling attention to the utter impracticability of some of the methods proposed by the editorial writer in the *Lancet and Clinic* to limit the propagation of "defectives." 1. He gives the following

advice to persons contemplating marriage: "Do not marry until you have reasonable prospect of supporting a family, and also do not marry when the law of heredity determines the probability that your progeny will be physically and mentally defective."

Now and then, an individual who, while "sowing his wild oats," had become infected with syphilis, or one who believed he had an inherited disposition to consumption, might refrain from marrying for fear he might be the means of bringing into the world children tainted with disease; but where can one be found who believes that by marrying he would entail *mental defect* upon his offspring? No man who is a fool believes himself to be a fool, so it is not to be supposed that an idiot will act upon it. Nor will it be easy to find a young man or young woman, though he or she may know that an ancestor was insane, who will believe that there is any danger of his or her becoming insane. A young widower a few years ago consulted us in regard to the advisability of his marrying a lady in whose family there was a taint of insanity. We earnestly advised him against doing so. We emphasized the danger of begetting children with a hereditary predisposition to insanity. He nevertheless married her, and she is now the mother of a daughter. They are both our enemy for advising when solicited.

2. The writer says: "To the State we would say that when this probability becomes a certainty, prohibit the exercise of such potentialities." In reply we will say that even if the State of Ohio, or any other State, should enact a law forbidding marriage to persons mentally or morally "defective," it would often be exceedingly difficult to establish the *defect* except in the case of individuals shut up in lunatic asylums or actually suffering insanity. Bank presidents, legislators, Government officers, etc., so frequently steal, that it would be exceedingly difficult to prove that this or that man was a confirmed thief—that he was a thief in consequence of an abnormal condition of his brain—the organ of the mental and moral emotions.

If every one against whom it could be proven that he had lied many times, had often gotten drunk, had frequently been guilty of acts of dishonesty, should be refused a license to marry, we fear that marriage would become greatly limited. We presume the writer, however, classes as "defective" not all immoral persons, but only those who are not morally responsible for their immorality, but when it

is considered how exceedingly difficult it is to convict a man of a crime when there is no doubt of his guilt, how can it be hoped that a person can be convicted of being such a "defective" that if he marries and begets children his progeny will be thieves, drunkards, paupers, etc.?

It is proper and interesting to discuss the phenomena observed in the study of vice and crime, but to propose to stamp them out by legislative enactments is futile. The methods proposed are absurdly impracticable. The plan urged by the *Lancet and Clinic* editorial writer is as old as he is, but has never been adopted and never will be, on account of its impracticability.

SERIOUS CHARGE AGAINST PROFS. VON BERGMANN AND HAHN.—We learn from a letter in the *Therapeutic Gazette* that Profs. von Bergmann and Hahn will be prosecuted by the Government for inoculating patients with carcinomatous matter. The inoculated parties, we understand, were affected at the time with cancer, but the charge against them specifies and proves that by the experiments of the two professors new carcinomatous foci had been created on previously healthy regions of the body. Prof. Hahn is known to have transplanted in a carcinomatous woman three excised carcinomatous nodules to remote portions of the body, and to have thus produced three new carcinomatous foci in tissues previously healthy. Prof. Bergmann is known to have repeated this experiment with equally positive results.

It is stated that a Paris clinician of considerable repute recently created a sensation by reporting before the Academy his experiments regarding carcinoma, made in the St. Louis Hospital. The French experimenter could boast, not of having cured, but of having artificially produced, carcinoma in various hospital patients without their consent. Carcinomatous matter was introduced in various portions of the body of patients, who were not at the time, nor had been, affected with cancer, without their knowledge or sanction, and in spite of great pain endured by them. The experiments were invariably successful in making the patients carcinomatous. One of them died soon after. The Paris Academy protested energetically against experiments of this nature. The correspondent says that the President of the Academy would have better sustained the reputation of that illustrious body if he had called the next policeman and demanded the arrest of the scoundrel.

MISTAKES BY PHYSICIANS IN PROGNOSIS.—If physicians did not sometimes make mistakes, and very grievous ones at that, it would imply that they were more than human, for "it is human to err" says a proverb which every one has heard, and every one assents to. Who is there who will not admit that he has erred many times? If an individual should have the hardihood to say to us that he had never made a mistake, we would either regard him as a fool or believe that he thought we were a fool.

While many examples can be collected of mistakes made by medical men, yet not fewer, yea, probably far more, can be gathered of those committed by lawyers, judges, clergymen, statesmen, generals, etc. In listening, however, to the tirades of abuse which are often poured out upon the medical profession, one would be disposed to think that none but members of it ever made serious errors; but take up a history of the late war, and "the blood will be thrilled and the hair made to stand on end" on reading the many defeats of our armies and the frightful loss of lives through the blunders of commanding officers. Who has not oftentimes heard of judges sentencing men to ignominious deaths for murders they never committed? And have not many suffered imprisonment for years for offenses of which they were entirely innocent? The acts of the most learned and capable men in every department of life have been marred by egregious blunders. To such an extent is this the fact that it would almost seem that men's errors are in excess of things done rightly by them.

The Hon. Andrew H. H. Dawson, of the New York Bar, recently read a paper before the Society of Medical Jurisprudence, entitled "*Throw Physic to the Dogs*," which is published in the *N. Y. Medical Examiner*. In this paper are related a number of most egregious mistakes made both by distinguished and not distinguished physicians in prognosis. As the examples seem to be authenticated ones, and are interesting, we will quote a few of them for the benefit of our readers.

"When Chateaubriand was a refugee in London, he was pronounced so critically ill, by a consultation of physicians, as to justify a unanimous professional opinion that he could not survive a month. They said frankly to him, 'We can do nothing for you, sir.' This was when he was a young man. I need not inform you how white his head was with

the frosts of time when scores of years after that he went to his final account.

"In 1825 Hannah Moore wrote to Bishop Burgess, 'I have been raised up from twenty apparently mortal diseases, after having been given over by the doctors. I have been reckoning up no less than twelve physicians, and almost as many apothecaries, who attended me at different times, not one of whom is alive.

"No case is better known than that of the stubborn Samuel Rodgers, who obstinately refused year after year to come to time, by going out of it, under medical predictions. Having a keen sense of the ridiculous, and a large endowment of generosity, he did not only enjoy the sport of his doctor's disappointments, but he shared his fun with his friends. Pendemonte, the Veronese poet, and Henry Howard lived forty years on a fore-dooming medical lease of six months. A medical gentleman of prominence presided at a dinner given to Washington Irving thirty years after he had expressed the medical opinion that he would not live one year. In 1788 a consultation of physicians was held at the bedside of Wilberforce, and they announced unanimously that he had but one fortnight to live, and yet the badly fatigued fortitude of his undertaker had to worry through forty-five years of impatient waiting and watching for a decent excuse to present his little bill. Henry A. Schumacher, an employe of the Baltimore Post-office, was wounded in the war, and his wounds were pronounced necessarily fatal. Two months afterwards, when it was found that the man was still alive, the case was considered so remarkable that in August, 1864, a commission of twelve surgeons examined him (Dr. Bliss was one of them), all of whom pronounced his survival up to that time to have been almost miraculous. They decided, however, that he could not live ten days longer. To-day he is alive and hearty. In a letter to Mrs. Dunlop, Burns boasts that his infant son had come safely through smallpox and measles without a grain of doctor's drugs in his bowels. Is there not a patient woman mentioned in the Gospel who for twelve years suffered many things of many physicians, only to grow worse all the while? Then, did not the pitiless prophet predict to Egypt's daughter, 'In vain shalt thou use many medicines, for thou shalt not be cured'? Said Montaign, 'I always despised it [medicine], and when I am sick, instead of recanting, I begin yet more to fear and hate it, and tell those who importune me

to take physic that they must at least give me time to recover strength and health, that I may be better able to support and encounter the violence and danger of the potion.' Madame Du Mere Regent, when taken ill in Paris, declined proffered medical assistance, exclaiming, 'I am already quite sick enough.' Edward Coke's biographer ascribes his longevity to his prejudice against doctors. [We know a number of very smart people who always had strong prejudices against lawyers, and who believe that they owe the possession of their wealth to the fact that they have persistently kept themselves out of their clutches—that is, they have settled their disputes by arbitration, even though, in their opinions, they had to endure wrong, rather than employ a lawyer and go to law to obtain their rights.—ED. MED. NEWS.]

"In a letter to Sir Martin Stutville, Mr. Meade writes that when Sir Edward was taken ill in his eightieth year he declined to take the prescription of a physician whom a friend sent to his bedside, politely remarking, 'I never have taken physic, and will not now begin.' When Dr. Dondi found a plate of strawberries in Petrarch's sick-room he interdicted them, when Petrarch requested him to read his diatribe against drugs and his eulogy on fruit. In ten minutes thereafter he had dismissed his doctor and breakfasted on his strawberries. He got well; whether it was because he escaped his doctor or disgusted his strawberries, I can't say."

The editor of the MEDICAL NEWS, several years ago, was attending upon a gentleman who was convalescing from a severe attack of typhoid fever. The patient inquired of him one day if he could be permitted to eat a cucumber pickle, as he had a "great hankering for it." The pickle was interdicted for the reason that it might bring about a fatal result. Shortly afterwards a friend of the patient dropped in to see him and advised him to eat the pickle notwithstanding that the doctor had forbidden him to do so, relating a number of instances in which persons, much sicker with typhoid fever than he was, had disobeyed their physicians as regards eating pickles, watermelons, cucumbers, cabbage, ham, etc., and had immediately begun improving and got well almost right away. The patient concluded to discard his medical attendant's warning and to take the advice of his visiting friend. He ate the pickle and in less than twenty-four hours he died in great pain. We could relate a number of similar instances.

ONE HUNDRED DON'TS.—Dr. H. M. Whelpley, of St. Louis, editor of *Meyer Brothers' Druggist*, has written for that journal one hundred don'ts for the benefit of druggists. Among them are the following:

"Don't forget that apothecaries' ounce contains 480 grains, while the avoirdupois weighs only 437½ grains.

"Don't forget that some of the powders left after exhaustion by percolation make fine microscopic objects.

"Don't forget that cocaine and borax form an insoluble borate of cocaine, while boracic acid and cocaine do not.

"Don't use sawdust to catch the drippings of oil tanks or barrels; it may cause spontaneous combustion. Sand is safer.

"Don't forget that chloral and cyanide of potassium mutually decompose each other, and that hydrocyanic acid (Prussic acid) is one of the products.

"Don't forget that many celluloid articles can be mended by covering the edge with glacial acetic acid and pressing them firmly together.

"Don't forget that chlorate of potassium and iodide of iron are incompatible, as iodine is liberated.

"Don't forget that sulphur and saltpeter may explode if pounded together in an iron mortar.

"Don't forget that the evaporation of a solution of hydrochlorate of cocaine decomposes the salt.

"Don't forget that physicians sometimes intentionally prescribe pharmaceutically incompatible mixtures.

"Don't forget that quinine will preserve mucilage, paste, etc.

"Don't forget that powdered rosin may produce spontaneous combustion.

"Don't attempt to dissolve chlorate of potassium in ether. It will explode.

"Don't attempt to form an alcoholic solution of chromic acid unless your will is made."

THE UNIVERSITY OF LONDON EXAMINATIONS.—We copy the following from the *Lancet* of September 5, 1891. Medical students of this country will find it interesting, showing, as it does, what medical works are advised to be read by medical students attending the University of London. It will be noticed that among the lists are quite a number of American authors:

"For the intermediate M.B. Examination of the Uni-

versity of London, the subject of Organic Chemistry may be studied in the text-books of Williamson and of Fownes. *Materia Medica* and Therapeutics, besides the books above mentioned, are more fully treated in the works of Brunton, Phillips, Bartholow, Hare and H. C. Wood; and that of Hale White for General Therapeutics. Physiology as for the Primary F.R.C.S., with perhaps the addition of such books as that of Power and Harris for laboratory work and of Schafer for practical histology. Nor should the subject of Physiological Chemistry be neglected. In the recent work by Halliburton or that of Cranston Charles the student will find information of the greatest value to a clear comprehension of this valuable branch of physiology. The Anatomical text-books will be those recommended above. For the M.B. Examination, the subject of Medicine may profitably be further studied in Niemeyer's Text-book, in the exhaustive and scientific treatise of Hilton Fagge, in that of Austin Flint, in the admirable work of Strumpell, in Reynolds' System of Medicine, and in Trousseau's Lectures. The excellent articles in Quain's Dictionary of Medicine, and the useful Dictionary of Practical Medicine edited by Kingston Fowler, ought to be mentioned here. The large System of Medicine by American Authors edited by Wm. Pepper contains articles which may often be usefully consulted by those who are desirous of obtaining full and accurate information. For Medical Diagnosis there is no work equal to that of Da Costa, which deals almost wholly with symptomatology. Special monographs (see M.D. Exam.) may also be consulted. Pathology, which should be worked at practically, may be studied in Green's, Coats', Payne's, Ziegler's or Hamilton's text-books, also in the work of Wilks and Moxon, and in that of Cornil and Ranvier. Bacteriology is assuming so prominent a position that a knowledge of its leading facts may be deemed to be necessary to the fully equipped medical graduate. In Crookshank's Manual, or the smaller work on Micro-organisms by Klein, all such information is to be obtained. For Midwifery, the writings of Playfair, Galabin, Leishman, Lusk and Barnes; Gynæcology, those of Galabin, Lombe, Atthill, Edis, M. Jones and Barnes; Dermatology, the text-books of Tilbury Fox, Living, Duhring, R. Crocker, Jamieson, Mapother, and M. Morris; Medical Electricity, De Watteville or Poore; Medical Ophthalmoscopy, Gowers' Hand-book and Atlas. The small books of E. Browne and of Berry are useful in

earlier ophthalmoscopical work, whilst the Atlases of Liebreich and Jaeger are of much value for reference.

For the M.D. Examination, the candidate will do well to extend his reading to the better-known monographs, such as those of Murchison on Continued Fevers and on Diseases of the Liver; Gowers, Ross, Charcot, Wilks, Bramwell (Spinal Cord), and Suckling on Diseases of the Nervous System; Balfour, Byrom Bramwell, and Walshe on Diseases of the Heart; Powell and Walshe on Diseases of the Lungs.

MEDICINE AND SURGERY OF THE PAST.—Sir Astley Cooper, by way of illustrating the condition of medical science in his time, remarked that it was consolatory to know that the human frame was better understood at that present epoch by students than it was forty years ago by professors. He relates in one of his lectures, which appears in the first number of the *Lancet*, a case of one of the dressers at Guy's Hospital, who, in opening a vein, wounded the artery beneath it, and before the bleeding could be stopped the patient lost thirty-seven ounces of blood. One of the surgeons cut down on the artery at the elbow to secure it, but in doing so he divided the principal veins; inflammation and mortification resulted, and death soon followed. He relates in the same lecture another incident, also connected with Guy's Hospital. A dresser prevailed upon the surgery boy to allow him to amputate his bad leg. The boy was conveyed to the operator's lodging. The operator commenced; but finding a great discharge of blood, he cried out to his assistant, "Screw the tourniquet tighter." This was done, but in the process the screw broke, and at this unforeseen accident the dresser lost all his presence of mind. He jumped about the room, ran to the sufferer and endeavored to stop the effusion of blood by compressing the wound with his hands, but in vain. The boy would have died had not a pupil accidentally called, who had the presence of mind to apply the key of the door to the femoral artery, and, by compressing it, stopped the bleeding. The study of anatomy was discouraged in every way by superstition and prejudice. In Queen Elizabeth's reign a charter had been granted "for anatomies" conferring on the Royal College of Surgeons the privilege of having annually three or four human bodies of such as had been condemned and executed for felony for the purpose of dissection.

THE MICROSCOPE IN DIAGNOSIS.—Dr. Johnstone recently stated in the Academy of Medicine of Cincinnati, that an unusually well-developed woman had a slight amount of metrorrhagia, and, on examination, he found not only a little lump, about the size of an ordinary ovary, on one side of the uterus (which he took for fibroid), but a slight protrusion of the endometrium from the os. He pinched off this tissue from the cervix and put it under the microscope, and, to his surprise, found it was cancer. Of course, no operation was undertaken, as the organ already showed that it was probable that the peritoneum was involved. Had it not been for the microscope, he said, he would have been inclined to have opened the abdomen thinking that something could have been done to relieve the protrusion which he found. In six weeks this little lump filled the whole abdomen, and in eight the patient was dead. He was thus saved from the opprobrium of operating upon a dying woman.

SAMPLES of Sander & Sons' Eucalypti Extract (Eucalyptol), gratis, through Dr. Sander, Dillon, Ia. Eucalyptol stands foremost as a disinfectant, is a perfect check to inflammatory action, and invaluable in zymotic diseases. Meyer Brothers Drug Company, St. Louis, Mo., sole agents.

THE SOUTHWESTERN MEDICAL SOCIETY will hold its coming meeting in parlor "A" of the Burnet House, this city, October 1 and 2. A good meeting is hoped for.

"ROBINSON'S LIME JUICE AND PEPSIN" is an excellent remedy in the gastric derangements particularly prevalent at this season. It is superior as a digestive agent to many other similar goods.

TOLERATION IN MEDICAL ETHICS.—We take the following from an editorial in the *New York Medical Times*:

"We are in receipt also of a letter from a professor in a leading 'regular' college from which we extract the following, as an indication of a feeling which is rapidly gaining ground. He says: 'For the regular colleges to refuse to regraduate those having a degree from the Hahnemann

Medical College, of Philadelphia, on the same terms that they will those of other regular colleges, I, for one, deem an act of folly. They ought to be glad of the opportunity of having the young men, at the very outset of their careers, discountenance creeds and adopt the methods of science.'

"We are also in receipt of a letter from a professor in a homeopathic college which says: 'I believe the day will come when the profession will be educated up to the point when sectarian distinctiveness will be dropped.'

"Within the last two months we have conversed with a large number of recent graduates of homeopathic colleges, and every one of them has complained of the position in which they are placed by their sectarian diploma. The graduate of a distinctively homeopathic school is sadly handicapped on many accounts, and so long as the *great majority* feel as they do in respect to sectarian designation, no change for the better can be expected. Is it right and just toward a student to place him in a position where he may be embarrassed, particularly at a critical moment? Suppose a graduate of a homeopathic college desires to enter the United States army or navy, he will find himself embarrassed at the very outset! Preceptors should bear these facts in mind, when advising a student to enter a medical school!"

BROKEN DOSES OF ANTIFEBRIN are said to be much more effective in keeping down fever than is the single large dose in which the drug is commonly administered. Dr. M. A. Favart, of Berne, made this the subject of an inaugural dissertation, giving the results of his experiments in the medical clinic of the hospital at Berne. He lays down the general rule that rapidly acting antipyretics like antifebrin should be given in diluted doses, while those whose action is slow, like quinine, should be given in the single large dose. He found that in cases of typhoid fever, doses of from three-quarters of a grain to a grain and a half of antifebrin repeated hourly were sufficient to materially depress the fever both during the daily period of pyrexia and that of defervescence. The same was true of the afternoon hectic of consumption. The higher the temperature the better the drug seemed to act, and there appears to be no danger connected with this method of administration.—*Northwestern Lancet.*

ADULTERATION OF FOOD.—Adulterations of food may be divided into two classes: Those which are simply fraudulent, but not necessarily injurious to health, as the use of some cheap but not unhealthy ingredient with the pure article for the purpose of underselling or increasing profits; for instance, adding water to milk, peas and carrots to coffee, meal to mustard, wheat flour to pepper.

2d. Those which are injurious to health—the use of drugs or chemicals for the purpose of changing the appearance or character of the pure article; as, for instance, the admixture of potash, ammonia and acids with cocoa to give apparent smoothness and strength to imperfect and inferior preparations; the use of alum and other deleterious substances to raise and whiten bread.

Baron Liebig, in his “Familiar Letters on Chemistry,” states that the bakers of Belgium discovered some years ago a method to produce from damaged flour a bread which appeared to be made from the finest and best wheat flour; and they did it by adding to the dough sulphate of copper.

It is stated that in Holland the adulteration of coffee with chicory was first practiced. In England a patent was taken out subsequently, we are informed, for a machine which moulded chicory in the shape of the coffee berry. In that country, Dr. Edmund Parkes says that cocoa is very commonly mixed with cereal grain, starches, arrowroot, sago or potato starch; that sometimes brick-dust and peroxide of iron are used.

Dr. Hassell, in his work on “Food and its Adulterations,” states that out of sixty-eight samples of cocoa examined thirty-nine contained coloring matter, such as redde, Venetian red and umber.

THE NEW ENGLAND MEDICAL MONTHLY.—This journal, which has attained a high rank among the most popular and most progressive medical journals of the country, completed its *tenth year* with the issue of its September number. It has not lived quite half so long as the MEDICAL NEWS, but, nevertheless, it has reached an age that establishes it upon a “firm foundation.” Having finished its first decade, we hope it will live to complete many additional decades.

Dr. Wm. C. Wile, the talented editor of the *Monthly*, celebrates the fact of the journal becoming ten years old by issuing the September number as a “*Souvenir Edition*,” or

"*Summer Number.*" The number, therefore, has been printed on coated paper, and is embellished with accurate portraits of very many distinguished physicians. Without having made an enumeration of them, we judge that not less than fifty pictures appear. Among them we notice the portraits of Ephraim Cutter, Robert Koch, Alexander Mott, the late Washington L. Atlee, the late S. S. Gross, Lawson Tait.

The *Souvenir Edition* will excite the admiration of all receiving it. It proves Dr. Wile to be a gentleman of taste, culture and refined enterprise. No one but himself, among medical editors, possesses the originality necessary to conceive such a beautiful work, which will be to his subscribers both a "thing of beauty and a joy forever."

AWAY WITH KOCH'S LYMPH.—I have given Koch's lymph a fair trial and have carefully observed its effects, and have become firmly convinced both of the danger which attends its use and its utter inability to cure any form of tuberculosis. In not a single instance of eleven cases of surgical tuberculosis that came under my own observation did the treatment result in anything more than a temporary improvement, and in several of them it was followed by local extension of the disease and serious impairment of the general health. The effect of tuberculin proved more serious in the treatment of the forty-three cases of pulmonary tuberculosis. There can be but little doubt that in a number of the fatal cases, death was hastened by the treatment, and that in a number of the mild cases it contributed largely towards the rapid local extension of the lesion; while the tuberculin treatment of pulmonary tuberculosis can show no better results, it is difficult to ignore the fact that it has been productive of more harm than almost any other plan of treatment heretofore suggested, and on this score alone the verdict, "Away with Koch's Lymph!" is timely and imperative.—*N. Senn, M.D.*

THE ETIOLOGY OF DIPHTHERIA.—In the *Johns Hopkins Bulletin*, Dr. W. H. Welch gives the latest results of the researches on this point, and adds from his own studies still other observations. From this he concludes it is fully proved that the specific primary cause of diphtheria is the Klebs-Löffler bacillus. This organism he calls the bacillus diphtheriæ. This bacillus is present in every case of primary diphtheria,

in such number and situation as to explain the local manifestations of the disease. It can be isolated in pure culture readily, and a disease, identical in all respects with human diphtheria, can be produced experimentally by the inoculation of pure cultures.

Thus we are in possession of positive means for making a diagnosis of diphtheria. The method of doing this is not difficult, and can be readily applied, though it may be questioned whether many practitioners are likely to make use of these means.

We are taught that there are pseudo-membranous anginas which must be separated from ætiologically pure diphtheria, and that diphtheria may exist in extremely mild forms even without visible pseudo-membranous deposits.

The endless controversy as to whether diphtheria is primarily a local or general disease is settled. It is primarily local, the grave constitutional symptoms are the result of intoxication with poisonous products, formed by the local action of the bacilli.

We can study the varied effects produced upon the animal body by the specific toxic products of the diphtheritic germ. We can separate the alterations belonging to the disease itself from the many complications of the disease. Intelligent measures of prophylaxis can be based upon a definite knowledge of the characters of the specific germ and its behavior in the body. Rational indications for treatment can be established, and have been formulated.—*American Lancet.*

FOUNTAIN PENS.—We have a number of times made mention of fountain pens in the *MEDICAL NEWS*, and recommended the use of them by physicians. There is no class of persons, we think, to whom they are so convenient and necessary as medical men. We have used one for five or six years—using it for all of our writing—and could not be induced to be without one. All prescriptions should be written with ink, and by always carrying a fountain pen in the pocket this can be easily done.

We have recently been shown a fountain pen which is superior to those of any other construction we have ever met with. It is called the "Walke's Writing Wonder," having been invented by Mr. H. A. Walke, of Columbus, O. As evidence that we are not alone in endorsing this pen, we quote the following from the *Chicago Trade Re-*

view: "We take pleasure in adding our endorsement to the volumes of testimonials in regard to the merits of 'Walke's Writing Wonder' gladly tendered, knowing that in so doing we are only paying honest tribute to real worth. It is *par excellence* the best—emphatically the best in every respect—and it is the only one having the unqualified endorsement of this paper. Many who read these lines have realized from practical use its supereminent qualities, but to those who have not as yet availed themselves of its advantages we advise an immediate trial. Our word for it, its use will prove so surprising, so overwhelming, they never will go back to the fossilized affairs of the days of yore. We rest our reputation upon its effectiveness and utility, and endorse it alone strongly, emphatically and exclusively." For circulars containing description, prices, etc., address "Walke's Writing Wonder," 41 Wesley Block, Columbus, O.

LIFE INSURANCE AND SYPHILITIC RISKS.—Mr. Jonathan Hutchinson has published a paper in the London *Practitioner* on the "Modern Treatment of Syphilis," in the course of which he considers some of the more important relations of syphilis and life insurance. He holds that an insurance company might make a profitable business out of syphilitic risks, accepted in the early stage of the disease, and taken at the ordinary rates, for he has found that the threatened life is often a long one. In his experience such syphilitic persons appear quite as likely to attain to length of days as others who have not been syphilitic. In the case of those who present themselves free from symptoms, but have the history of a former attack, the advice is that they be not refused, provided that they have not definitely become the subjects of the tertiary lesions of the disease, or have not, owing to idiosyncrasy or inadequate treatment, had a prolonged siege of secondary symptoms. But even among these, there are not a few who would be regarded by Mr. Hutchinson as eligible risks at ordinary rates.

While there is no doubt but that many persons who have had constitutional syphilis attain to old age, completing the "years of their expectancy," as set down in life insurance tables, yet that such individuals should be classed among first-class risks we consider absurd. It is the general opinion of specialists, and our own observations confirm it, that when a person has suffered the secondary symptoms—

or, in other words, has been constitutionally affected by the disease—he never recovers, though for years, in consequence of treatment, not a symptom of the affection will be manifested. Can, then, a diseased man be regarded, all other things being equal, on a par, as regards prospects of longevity, with a healthy man? Certainly not. Strong, healthy men and women succumb to prevalent diseases every day, while feeble and delicate men and women, “with one foot in the grave,” continue to live—oftentimes living for months and years after their robust contemporaries have been placed under the ground. But does it follow, then, as a result, that “poor health,” instead of lessening the chances of long life, rather increases it; that hypertrophies of the heart, asthma, dyspepsias, bronchial affections, neuralgias, etc., should be considered as favoring longevity and not diminishing the prospects of it? We will admit that many persons who have organic lesions of a not serious character succeed in neutralizing, as it were, their lethal tendencies by strict attention to hygienic rules; but, nevertheless, such individuals can not be regarded as possessing equal chances of attaining to old age as a strictly healthy person. Supposing it can be relied upon that an individual, having a certain lesion, can prevent its shortening his life by a certain mode of living; how can it be depended upon that his circumstances will always be such that he can always fulfill the necessary conditions? A man must be peculiarly situated who will always be able to ward off what might injuriously affect him.

It is our conviction that a life insurance company that makes it an object to only insure first-class risks, can not accept persons who have had constitutional syphilis at any period of their lives, though it may be, at the time of examination, that several years have elapsed since they have had any manifestations of the disease. Such individuals, according to the views entertained in regard to syphilis, and they are no doubt correct, are diseased; and as diseased persons, although all morbid symptoms are in abeyance, their prospects of longevity have been lessened; in other words, they are no longer and can never be first-class risks.

EPILEPSY.—In a case of epilepsy of several years' standing, Dr. W. E. Postle, of West Jefferson, O., says that he has used Peacock's Bromides with perfect satisfaction to himself and patient. It controls the spasms perfectly, and seems to agree well with the stomach.

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Original Contributions.

Address in Medicine.

BY D. M. RAY, M.D.

Read before the Texas State Medical Association.

The germ theory of the origin of diseases, and the anti-septic treatment of wounds, have so occupied medical thought and literature in recent years that I believe I could not better introduce the work of this section than by giving a short synopsis of the nature and history of the micro-organisms on which the germ theory is founded.

The science of bacteriology, as studied and understood at present, is of quite recent origin; though several writers in the last two centuries have dimly foreshadowed the wonderful discoveries of the present. Oliver Wendell Homes, half a century ago, became convinced that puerperal fever was an infectious disease, that could be carried by the accoucheur from patient to patient. What this something *was* which caused the disease he was unable to say. His zeal and pertinacity in presenting his views before the profession were finally rewarded by seeing them generally adopted.

An anonymous writer in London published, in 1788, a pamphlet of about eighty pages on the nature of the infectious diseases in which he very nearly defines the germ theory of to-day, except that he does not speak of the possibility of the germs entering the system by way of the air passages.

The startling announcement by Koch, in 1882, that he had discovered and isolated the veritable germ of tuberculosis in the micro-organism known as the tubercle bacillus, gave an impetus to this line of study which continues to grow and swell, until to-day there are, in all parts of the

world, honest workers who are gradually lifting the veil which obscures the infectious diseases.

It is to the microscope and the art of staining and cultivating the bacteria, that we are indebted for the rapid advances being made in the knowledge of infectious diseases; and we shall be compelled hereafter to study diseases more from an etiological than clinical standpoint, and there is strong probability that our modes of practice may be revolutionized in the near future.

The germ theory of diseases is based on the fact that the earth, air and water are teeming with micro-organisms of the lower order of vegetable life, closely allied in nature and habits to the algæ and fungi. They have a definite life history, and perform several of the activities belonging to larger organisms; as they nourish themselves and grow, they reproduce their kind. Some species also have distinct movement when suspended in fluids.

They are vegetable cells, devoid of nuclei, and require, for their growth and development, as other vegetable matter, oxygen, nitrogen, carbon, water, and certain mineral salts, as well as suitable temperature, for we find in them, as in the larger forms of organic life, that different species require different temperatures and different soils. They are distinguished from animal cells in being able to derive their nitrogen from ammonia, and they differ from the higher vegetable cells in being unable to split up carbonic acid into its elements, owing to the absence of chlorophyll.

In the dried state they are found to consist of a nitrogenous substance called mycoproteine, 84 per cent.; fat, 6 per cent.; ash, 4.25 per cent.; undetermined, 5.75 per cent.

When of the round cell form they are called cocci or micrococci, and when of very large size they are known as megacocci. When the round cells are connected in a chain-like form, they are known as streptococci; when arranged in clusters like grapes, they are called staphylococci; when of quadrangular form, they are called tetrads or micrococci tetragoin. The irregular masses without definite shape are called the ascocci. The long or rod form is the bacillus. These are classified into vibrios or bent rods, spirals, and various modifications of these forms.

The bacteria reproduce themselves by fission, a constriction appearing around the middle which divides the one into two, the two into four, and so on ad infinitum. If the con-

ditions are favorable, and the supply of nutriment ample, there is no limit to their multiplication.

But we see among these lowly forms the same struggle for existence as obtains among higher organisms. One species succeeds another; one species finds the very matter necessary for its growth and development in the refuse of its predecessor, or perhaps in poisons that have caused their death. So that a specimen under observation soon becomes a veritable graveyard of races. If it were not thus, life upon the earth must soon cease, for the elements of nature would soon all be locked up in the various organic compounds. As all putrefaction and disintegration of organic matter is due to the action of the bacteria, it is to them that we are indebted for the fertility of our soils and the purity of our atmosphere.

We must therefore look upon the vast majority of the bacteria as our best friends and preservers, while we regard others as our enemies and destroyers.

When their life-course has been run, or the supply of nutriment exhausted, there appears, at some point within the cell, an egg-shaped, highly refractive speck, which grows at the expense of the protoplasm of the cell, which, together with the cell wall, gradually disappear, and the *spore* or seed is set free. The spore, like the kernel of grain, may, in the dried state, retain its vitality for a great while, to again grow and produce its kind, when placed under favorable conditions.

PTOMAINES.

Ptomaines are chemical compounds developed by the action of the bacteria, while performing their role as the great disorganizers of matter. The ptomaines, by their basic properties, resemble the vegetable alkaloids; they are sometimes spoken of as animal alkaloids, but incorrectly, as some ptomaines are formed by the putrefaction of vegetable matter.

While some ptomaines are highly poisonous, this is not an essential quality, for others are wholly inert; in fact, so far as known, the great majority of ptomaines are not poisonous. Also all the substances formed during putrefaction are not alkaloids.

The kind of ptomaine formed by any individual bacterium will depend largely upon the matter acted on, the temperature, the electrical condition existing, and the stage of the

putrefaction. Though, so far as known, only the bacillus of typhoid fever can produce the ptomaine typhotoxicon, and only the bacillus of tetanus can produce tetanine, a ptomaine which will cause tetanus when injected under the skin of an animal.

Some bacteria will only grow in the presence of air, and are therefore called *ærobic*, while others will only grow when excluded from the air, and hence called *anærobic*. Therefore, different ptomaines are formed in decomposing matter when exposed to the air, from those formed when the air is largely excluded.

Ptomaines are temporary forms, through which matter passes while it is being transformed by the activity of the bacterial life from the organic to the inorganic state. Complex organic substances are broken up into less complex molecules, and so the process of division and combination goes on until the simple and final products, carbonic acid gas, water and ammonia, result.

The variety of combinations into which an atom of carbon may enter during this series of changes is almost unlimited, and with each change in combination there is some change in nature; one combination may be highly poisonous, while the next combination may be perfectly inert.

That specific bacteria play an important part in the causation of some diseases is now almost universally admitted. The proof on this point in a few diseases amounts to a demonstration, while in other diseases where they are found it is not determined whether they are the cause of the diseased condition, or whether the diseased condition only furnishes a suitable soil for their growth.

To determine whether a particular bacterium is the cause of a disease, Koch has given the following rules to be observed:

1. The special bacterium must be present in all cases of that disease.
2. The special bacterium must be freed from other micro-organisms, and from all matter found with it in the diseased animal.
3. The specific germ thus freed from all foreign matter must, when properly introduced, produce the disease in healthy animals.
4. The bacteria must be found properly distributed in the animal in which the disease has been induced.

All of these conditions must be fulfilled before it can be

asserted that a specific organism is the cause of a given disease.

Admitting that many, if not all, specific diseases are caused by specific germs, the question arises, how do bacteria cause disease? Bacteriologists are now pretty well agreed that it is not by blocking up the capillaries of important organs, or disintegration of blood corpuscles, or consumption of the proceeds of the body by the bacteria, but to the chemical poisons or ptomaines generated by the bacteria, that we must look for answer to this question.

We must now regard every specific disease as caused by the introduction into the system of a particular germ, and this germ when so introduced into the system may be expected to produce its specific disease with the same degree of certainty as that the farmer will reap a harvest of wheat after sowing that grain.

We understand an infectious disease to be one where a specific germ having gained admittance to the body grows and multiplies, and in so doing elaborates a chemical poison which induces its characteristic effect.

Neelsen has recently published the following classification of germ diseases, which may aid us in the study of them

1. *General acute mycoses.*—In this class the germ grows exclusively in the blood vessels from which it is not able to escape, as types of this class are anthrax and mouse septicæmia. The injury inflicted or danger to life will be in proportion to the multiplication of the bacteria and the consequent amount of poison produced. In some of these diseases, a very small number seem to be able to produce a poison of great intensity. This is especially true of septicæmia in man.

2. *Diseases with local development of bacteria.*—In these diseases the bacteria multiply only in the neighborhood of inoculation. These are divided into four sub-classes:

(a) The bacteria developing locally produce a ptomaine which is absorbed and produces a general intoxication. Cholera and tetanus are examples.

(b) The general intoxication is present, but is overshadowed by the local inflammatory changes. Erysipelas and pneumonia are examples of this class.

(c) The local effects lead to necrotic results, as in hospital gangrene.

(d) The local effects of the bacteria lead to suppuration.

3. *Mycoses of the blood, with secondary local affections.*—The bacterium grows and multiplies in the blood, but the most prominent effects of the poison are manifest in the local lesions. As examples of this, with inflammatory symptoms, we have measles, German measles, scarlet fever, acute rheumatism and beri-beri, and in lower animals, chicken cholera. As examples of secondary suppuration and necrosis, we have diphtheria and variola.

4. *Mycoses with tissue proliferation or infectious ulcers.*—The new formation shows a tendency to degenerative changes, as suppuration and necrosis. Such are typhoid fever, glanders, tuberculosis, leprosy and syphilis.

The medical literature of the past year has been voluminous, as well as fruitful in valuable articles to all departments of medicine, and the few subjects I shall notice are not a tithe of the valuable articles that might be brought before you.

TUBERCULOSIS.

The manner of invasion, whether by hereditary transmission, and consequently through the blood, or by the reception of specific germs into the system by way of the lungs or alimentary canal, has been pretty well discussed. Until recent times, all writers felt no hesitancy in asserting a direct transmission from parent to child. The undeniable fact that the offspring of tuberculous parents were most frequently affected was considered proof enough of the role of heredity. Statistics show that thirty to forty per cent. of the children born of tuberculous parents become affected with the disease.

After Koch's discovery of the tubercle bacillus, the possibility of hereditary transmission was denied by the adherents of the theory of the parasitic origin.

But recently there is a growing belief that the old view was not far wrong. How shall we reconcile these views? Baumgarten is of the opinion that a child may be born with the tubercle bacillus in some of its tissues, which may remain dormant for years, or through life.

Congenital tuberculosis has been proven, by Baumgarten and others, in the foetus of the cow. Spitz found the spirillum of relapsing fever in the blood of a five-months foetus, whose mother died of a relapsing fever.

Arloing, Thomas and Strauss have had like experience with other micro-organisms. Nehaus found the bacillus

typhosus in the blood of a foetus whose mother aborted during an attack of typhoid fever.

From these experiments we are forced to admit that the tubercle bacillus may reach the foetus through the placenta.

To conclude this part of the subject, it may be said that while direct hereditary transmission is possible, it must be exceptional.

If tuberculosis is transmitted by heredity, it ought to show itself, as syphilis does, in internal organs, as liver, spleen and kidneys. In the vast majority of cases, the disease shows itself first in the lungs, and secondarily in other organs.

Cornet has recently published the result of some experiments undertaken by him to determine whether the walls and furniture of rooms occupied by consumptives become infected with the tubercle bacillus. He inoculated 311 animals with scrapings from the walls and headboards. Of this number, 167 died soon after infection. Fifty-nine, or one-fifth, were found after forty days to be infected with tuberculosis, and eighty-five remained healthy.

But in no case was the dust of walls infectious where sputum cups were used exclusively to receive the expectorated matter.

These experiments support the view that tuberculosis is chiefly spread by the spores floating in the air, and furnish proof of the possibility of preventing tuberculosis by the simple expedient of using sputum cups; never allowing the sputa to become dry, and thus disseminated in the air.

As bacteria cling so tenaciously to moist surfaces or fluids, there can not be much danger of becoming infected from the breath of a consumptive, but it is the germ-laden dry air that is to be avoided.

At the Congress held in Paris for the study of tuberculosis, the possibility of infection from the use of meat and milk of tuberculous animals was freely discussed, and it was the unanimous opinion of the members that it is highly dangerous to use such meat or milk, especially the milk, and they recommend that the milk be thoroughly boiled before given to children.

Steenthal reports the case of a woman who contracted tubercle of the skin of the hand by washing the clothes of a phthisical husband. Several cases of inoculation are re-

ported as having occurred from the use of an infected operating-knife.

Spillman showed to the Academy of Medicine in Paris that it is possible for infection to occur by flies.

Experiments undertaken by Malet and others to determine how long the germ of tuberculosis may retain its vitality when dried, frozen or putrified, go to show that under these conditions the vitality is retained for many months.

The literature of the year has only emphasized the importance of medical science to successfully combat the disease. The true treatment is prevention, and, as has been shown, is not difficult, and entirely practical.

CHOLERA.

A decided advance in the treatment of this disease is claimed by Cantani, of Italy. He recognizes the following indications: (1) Against the deposition or multiplication of the bacilli in the intestines. (2) Neutralization of the poison in the intestines, or its rapid removal from the blood. (3) Against the thickening of the blood by supplying water.

The bacillus can not successfully be reached by drugs passing the mouth and stomach, and therefore entero-clysis which by anti-peristaltic action can open the ileocæcal valve offers the only effective local means. His prescription is water, two litres, at a temperature of 100 to 104 degrees; five to twenty grammes of tannin, with or without fifty grammes of acaciæ, and thirty drops of Sydenham's laudanum. In some cases one injection was sufficient. Under this plan of treatment there were thirty-four deaths out of 117 cases, whilst at the same time, of 193 cases treated by other plans, there were 146 deaths. His third indication is met by the hypodermic injection of a saline solution (three per cent. carbonate sodium, and four per cent. chloride sodium).

Entero-clysis is used for the premonitory diarrhœa and first stage; hypodermo-clysis in the algid and typhoid stages.

CEREBRO SPINAL MENINGITIS.

An important contribution to the etiology of the disease is made by Foa and Uffreduzzi. They claim in every case to have found a micro-organism which they believe to be the essential factor in the disease and which is called by them *diplococcus lanceslatus*. It is identical with the salivary

septic microbe of Pasteur, Sternberg and Klein and with Frankel's diplococcus pneumonia. They advance the idea that croupous pneumonia may be caused by several micro-organisms, but cerebro-spinal meningitis is caused only by the one they describe. They believe there is a close relationship between the two diseases.

Dr. Merriwether mentions the following points in connection with an epidemic of cerebro-spinal meningitis at Asheville, North Carolina. The disease prevailed from January to the end of March, and there were in all 125 cases. He mentions that not one of the ninety-nine cases of which he took notes lived on high, well-drained ground. Nearly all the cases occurred in families using well water, whilst very few cases occurred in families using the water brought from a distance by pipes.

GASTRO-INTESTINAL DISEASES OF CHILDREN.

Epstein, the pioneer in washing out the stomachs of children, gives a further report, now extending to over one thousand cases. Thus far he has had no accident of any kind. The operation is in nowise difficult, and may be done in infants only a few days old. The patient is placed in the sitting posture, the body slightly inclined forward. While this plan may be beneficial in all cases of gastric dyspepsia, its greatest triumph is in cases of acute gastro-intestinal catarrh. The immediate effect of the irrigation is cessation of vomiting. Then nothing but white of egg (one egg to half pint) and water is given for twenty-four hours.

Some anti-fermentative agent is given after the washing, preferably benzoate of magnesia. Pfeiffer says the old idea that green stools depend upon an acid condition of the intestinal tract is no longer tenable, that biliverdin is changed into biliverdin by fermentation, with acid products. The reaction of green stools is always weakly acid or neutral. Everything which makes the intestinal contents more alkaline tends to produce green stools.

These diseases being very largely of bacterial origin, a rational line of treatment embraces means to dislodge the micro-organisms or germicides, and antiseptics to destroy them or neutralize the deleterious effects of their ptomaines.

Lactic acid has recently been brought prominently forward as a valuable remedy. This is given in half drachm doses of a two per cent. solution, sweetened or flavored with mint.

Resorcin and benzoate of sodium are highly spoken of for intestinal irrigation. Among antiseptics for administration per ovum, salicylate of bismuth is becoming quite popular; other remedies of this class are salicylate sodium, salol, resorcin, sulpho-carbolate of zinc and naphthaline.

Our State has been visited by no epidemic of wide-spread prevalence during the past year except the "grippe," with which perhaps many of you are personally familiar. It seems to have been general throughout the State and to have been no respecter of persons, but to have fallen indiscriminately on persons of all classes.

While the newspapers have very much exaggerated the extent of its prevalence and the direful results, there has doubtless been some deaths caused by it. Two types of the disease have been noted by most observers: (1) First strictly the catarrhal, in which the force of the disease was expended on respiratory organs and air passages. (2) The other type embraced those in which there were various sensory disturbances and severe myalgia, affecting nearly the whole muscular system. In the way of treatment, especially in the myalgic or neuralgic cases, perhaps no treatment has been of more signal value than a mixture of acetanilide and salicylate of sodium, followed by a few doses of quinine, after the acute symptoms have passed.

MATERIA MEDICA.

Among the new remedies recently introduced, the various new hypnotics and antipyretics have occupied a prominent position. The antipyretics have so recently been thoroughly discussed in the medical journals that I deem it unnecessary to discuss them here.

Among hypnotics we note urethan, acetal, methylal, sulphonah, amyhydrat, hypnone, chloralurethan, chloralamide and paraldehyde; of these, acetal and hypnone give but little promise of utility. We have not sufficient data in regard to the action of chloralurethan and chloralamide to discuss their merits with other hypnotics.

The new hypnotics, like chloral, have little power as analgesics; all may at times relieve pain by inducing sleep. It is somewhat difficult to estimate the relative value of hypnotics, but the order of potency seems about as follows: Sulphonah, amyhydrat, paraldehyde, urethan and methylal. None of these drugs equals chloral in the certainty of effects. Urethan, being soluble, is most rapid in its effects,

sleep being often induced in a few minutes. Paraldehyde and amyhydrate are also rapid in their effects; sulphonal, more than chloral or any other drug, is slow in producing its effects; often two or three hours elapse before its effects are seen. The effects of urethan and methylal quickly pass off, but the others, like chloral, usually cause sleep of five to seven hours. The effects of sulphonal are more prolonged; in fact, this is one of the chief objections to it. As to danger from their administration, paraldehyde and urethan seem to be in nowise dangerous. Sulphonal, even in large doses, has never caused death, though marked cyanosis has been induced by a dose of thirty grains. Concerning amyhydrate and methylal, we are not yet in a position to say with certainty as to the danger; would for the present recommend caution in their use. Chloral in a dose larger than twenty grains must be considered dangerous. The new hypnotics seem to have no depressing effect on the heart and circulation like chloral does. It seems to be pretty well proved that the system never gets so habituated to chloral that large doses can be taken with safety, as is the case with opiates.

It is believed that death has been caused from a dose of chloral that had often been taken previously without harm. Therefore we should not at once resort to chloral for insomnia, but try one of the safer hypnotics, such as urethan, in twenty or thirty grain doses. Perhaps paraldehyde is the best hypnotic to give when they must be given in full doses and continuously.

Among heart tonics, digitalis still holds its place against all comers, as the most certain and reliable, for nearly all cases where this class of drugs is indicated.

WHO'LL KILL THE BACILLUS?

Who'll kill the bacillus?

"I," said Dr. Koch.

"With my lymph and syringe,
I'll kill the bacillus."

Alas! Dr. Koch,

With false hopes you fill us;

For firm as a rock,

Holds the field—the bacillus.

And assembled bacilli

Through a cultur'd bacillus

Say, "We're not quite so silly

As to let Herr Koch kill us."

—*British Med. Jour.—Med. & Surg. Rep.*

Medical Therapeutics.

Treatment of Diphtheria with Salicylous Irrigations.

BY DR. PARISOT, DU THILLOT (VOSGES).

Translated for the CINCINNATI MEDICAL NEWS from the *Bulletin General de Therapeutique*, Paris, September 15, 1891, by Mon. E. A. Quetin, Juge de Paix, Tonnerre, France.

In the course of the year 1890, at B——, there was an epidemic of diphtheria actually ended. During its prevalence we used irrigations with salicylous solutions in the various manifestations—angina, coryza, laryngitis—coming under our observation. Before employing that mode of treatment, and although we often had resorted to badigeons with salicylous acid, and also to different antiseptic pulverizations, we had a considerable mortality (ten or fourteen cases); since the use of irrigations we quote only five deaths in twenty-four cases. Those results have induced us to publish the present data with an easy *modus operandi* of the already known property of the salicylic acid.

Salicylic acid was indeed used frequently as a topic in cases of diphtheritic angina. Berthold, of Dresden, made successful applications of it in stomatitis, in aphthæ (muguet), and also in diphtheritic angina. Moizard and Bergeron recommend it, and Gouthem obtains thirty-one successes in thirty-one cases of diphtheritic angina treated by touching with a salicylous solution. Lastly, M. M. d'Espine and Picot indicate the treatment of the diphtheritic angina by salicylous solutions irrigated from which they obtained good results.

(The writer describes some chemical experiments demonstrating the destructive action of salicylic acid on diphtheritic false membranes.)

That destructive action of the salicylic acid upon the false membrane is followed by an influence preventing new false membranes from forming again so rapidly after salicylous irrigations as they habitually do after scraping. This could easily be remarked among children under our treatment and with whom, after four or five careful irrigations, we noticed, not a complete absence, but a considerable diminution in the number and extent of the false membranes which were before lining the throat and reproducing themselves rapidly. Therefore we are authorized to think that the mucous membrane itself is modified also, and rendered, so to speak, im-

proper to the reproduction of false membranes and the culture of Loëffler's bacillus. We can not explain otherwise the rapidity with which the throat is deterged.

Let us now see how we proceed.

First we have constantly used a solution of salicylic acid at $\frac{1}{1000}$, except in grave cases, when we have used the solution at $\frac{2}{1000}$. The first one has always seemed to us sufficient. We obtained a very limpid solution without any precipitate with the following formula:

Salicylic acid,	. . . . .	1 gramme.
Water,	. . . . .	980 "
Alcohol at ninety degrees,	. . . . .	20 "

Dissolve in the alcohol and add the water.

That quantity of twenty grammes of alcohol is sufficient but necessary; it has no inconvenience, as we have ascertained.

We always irrigated the interior of the throat to the extent of one litre and one and a half, even sometimes two litres of that solution in twenty-four hours. At the start of the treatment, we had simply used a glass syringe. Later, in order to obviate the inconvenience of the intermittence of the jet by a syringe, and especially to avoid the slowness and the difficulty of the irrigations, we have employed the apparatus that we are going to describe and which is simply the bock-laver modified for the occasion.

It is composed:

1. Of a tin receiver of a capacity of about seventy-five centilitres, provided, at the top, with a ring to be fixed in the wall, and at the inferior part with a tubulure of a narrow caliber.

2. Of an india-rubber tube adapted at one end to the inferior tubulure of the receiver and at the other to a glass tube very slender at the point.

3. Of a pression-pinch placed on the india-rubber tube for interrupting the jet at will. This apparatus is suspended about one metre above the head of the child, held by some person while another may direct the jet into the back throat. The jet is thus projected with force enough to *detach* the false membranes.

The little patient must be in a position such as not to be tempted to swallow too great a quantity of the projected liquid, or not to be got into a fit of coughing. With very young ones the position is of a great importance, as when ever there are fears of asphyxia. The head of the patient

should be inclined forward, with the face turned toward the earth. In that position, it was perhaps more difficult to operate the irrigations, but we were sure that the liquid would be easily thrown out carrying away the false membranes. And it so happened.

The solution may be projected easily and without danger into the nasal fossæ. In three cases of diphtheritic coryza accompanying or preceding angina, we obtained good results.

Since we adopted the treatment by salicylous irrigations, we have had twenty-four cases, out of which were nineteen cures. In conclusion, we shall state that since the application of our method, we did not observe any paralytical complications.

On the Treatment of Ulcers by Heat.

BY DR. A. STEPANOFF (OF ST. PETERSBURG).

The application of heat, as a curative agent, in spite of the works of some authors, especially Russian, has not gained to this day the reputation enjoyed by other therapeutic methods. Nevertheless, the physicians who were applying that *local heat* in some cutaneous affections, as well as for organs situated more deeply, were persuaded that, by that means, we obtain results superior to those of all other modes of treatment.

I shall only indicate here the rôle of heat, in exposing its action on the cicatrization of the different ulcers of syphilitic origin and simple, localized chiefly on the legs, about the tibia, and rebellious against our ordinary treatments.

Among the therapeutic methods applied to the cure of ulcers, up to this time, it would be difficult to indicate a single one offering thoroughly satisfactory results. That insufficiency of methods should be accounted for by the reason that, in order to arrive at the cicatrization of an ulcer, we must insist on placing it in conditions as much as possible favorable to an absolutely regular state of circulation and nutrition. It is only in realizing those physiological conditions that we can expect obtaining the immediate regeneration of the tissues and the prompt reconstruction of ulcers.

(The doctor details the methods of Reverdin, Ehiersch, Moras, Günther, and then proceeds thus): As much as I know, up to this time, in the treatment of ulcers, no author has had recourse to localized heat, this permitting us to re-

establish the destroyed circulation and to increase the nutrition of the tissues better than any other therapeutic agent.

Several Russian authors (Oussas, Nossiloff, Gouriyne, etc.) have already published their investigations on the action of heat as an agent capable of hastening the transformation of different inflammatory processes. All those authors were completely satisfied with the results obtained, which were better than those of previous methods.

Being in possession of some notions concerning the favorable action of localized heat upon different inflammatory processes, I availed myself of them in treating syphilitic ulcers, also simple and chronic ulcers which could not be combated by any other method. My observations were made at the Hospital Kalinkine, in St. Petersburg, where a great many syphilitic women are found and women having simple cutaneous lesions and ulcers.

The most practical way of applying that localized heat consists in employing india-rubber bags filled with warm water, and placed on the affected point. In order to avoid the phenomena of irritation, I previously applied on the ulcer a compress imbibed in the boracic solution (3 per 100), covering it with the bag of hot water. After one hour to one hour and a half, it becomes necessary to substitute for the bag that cooled off, one filled with water having a temperature as high as the patient can stand. The calefaction of the ulcerous center was generally continued during eight or nine hours. The results of this mode of treatment were as follows: First, the influence of the heat is noticed on the subjective sensation. After the heat has been applied a few hours, the pain and tension produced by the ulcer are diminishing considerably. After a few days, those pains subside entirely, not to return, even if the applications of the bags of warm water are stopped.

The purification of the ulcer goes on with an extreme rapidity, as well as the separation of the gangrenous eschars from the healthy parts. The suppuration diminished, instead of increasing as some authors pretend, and the ulcers get covered with normal granulations, at the peripheral parts of which the cicatrix soon appears.

If the ulcer was at first presenting callous edges, these, after the application of the bag of warm water, become soft and form a thin layer of epidermis which, spreading gradually, covers finally all the ulceration.

With some of my patients, ulcers which had resisted

various treatments for several years were completely healed by the application alone, without the intervention of any other therapeutic agent.

It is necessary to note here that heat acts favorably, not only against the ulcers of different kinds, but also in other inflammatory states of the bones and of the articulations (Nossiloff, Gouriyne, etc.).

(The writer adds details of three favorable observations, with his conclusions in accordance with them.)

The Question of the Etiology of Cancer.

BY A. PILLIET.

Translated from the French for the CINCINNATI MEDICAL NEWS by Dr. H. Illoway, Cincinnati, O.

The discovery of Villemin (the inoculability of tuberculosis) dates back to 1865. Its complete demonstration required twenty-five years. For cancer (or, better, for cancers) a series of studies modeled upon those which led Villemin to his marvelous discovery have been made with indifferent results however. The inoculation of the microbes of cancer made by Scheuerlen, by Phallock and Bellance, and many others among the Italians must be specially cited, have been attended with only contradictory and indifferent results. On the other hand, the inoculation of the direct product of cancer, the history of which we have given on a previous occasion ⁽¹⁾, seems to assume considerable importance in consequence of some recent articles, some of which have attracted the greatest attention even in the extra-medical press.

The question of the prophylaxis of cancer has also made notable progress; it appears to me that it would be eminently proper to take a serious account of all the recent works on this subject.

In fact, a certain number of cancers, perhaps the greatest number, are nothing else than monstrosities, that is to say, aberrant developments from this or that part of the organism; it is, generally, an epithelial part which is in play; the cancer or epithelioma comports itself, then, like any parasitic affection; it invades the lymphatics, the veins, the serous membranes; if it be the epithelium of the rectum, its colo-

(1) A. Pilliet, *Revue de Chirurgie*.

nies will pullulate in the whole network of the portal vein ; they may be arrested at numerous places and perish there, but the capillary filter of the liver will hold them back and we will have secondary cancers of this organ.

If it be a malignant tumor of the ovary, it will engraft itself upon the peritoneum ; its debris may become scattered and sown over the whole small basin, as Virchow saw it and as all the world saw it after him. A very limited tumor of the stomach may give rise to a tense injection, a veritable cancerous lymphangitis of the whole abdominal serous membrane, and may even reach the pleura. It will invade the ganglions to above the clavicle. ⁽¹⁾ It is very probable that, in all those cases where the debut of the affection can be followed up and see it come into existence without contest, from this or that organism, mucous or ovarian ; the parasitic or infecting agent is no other than the cellule of the invading tissue itself. The close relationships which connect cancerous affections with certain anomalies of development confirm this hypothesis, which is nothing more than a development of that of Cohnheim, which was defended with great talent by Dr. Brault in the *Revue de Medicine* (1880), and to which M. Bard, of Lyons, attached himself.

But there is another side to the question, the importance of which becomes greater every day, and which appears in contradiction with the first ; it is that of the relationship of inflammation to cancer. *A priori* the notion of a parasite, of a contagion, of a possible epidemic, contradicts that of a monstrosity, of an exaggerated development of tissue ; thus every author has sought to get around this difficulty. There is nothing else to be done for the present, and we will admit voluntarily a *modus vivendi*, the terms of which shall be thus formulated : The greatest number of cancers is formed by the multiplication of cellules coming from the ectoderme or entoderme ; these are the epithelioma. The sarcoma forms a separate branch, whose exact value has not yet been fixed ; the tumors formed of these tissues resemble very much the embryonic state of these same tissues, but the proliferation of their cellules may be provoked by a series of external agents. Admitting that the epithelial cellule is the veritable parasitic agent of epithelioma, we can nevertheless understand that this cellule may multiply outside of the constitution of the organism, under the influence of external agents, whose rôle we must now establish.

(1) Thesis, 1888, Berlin, *Adenopathie*.

We have already seen that the cultures of microbes have given no result; other parasites had been sought for the sporospermics, and still no light has been shed upon this point. The inoculations, which for so long a time were barren, seem to be giving important results now; but it is always the inoculation from species into like species. We can inoculate a guinea pig with a tumor from another guinea pig, but up to the present we have not succeeded in inoculating it with a tumor from the human species. By the side of these two methods of study we have still a third, the importance of which is very great in our epoch, when the great majority of country practitioners are well-instructed physicians, who can furnish us with the information that can be obtained in no other way.

It is evident that if every practitioner in the country or small village had in his possession the statistics of all the cases of cancer observed by him, and if he published these with remarks as to the geological constitution of the soil, the alimentation, hereditary manifestations, we would in a very short time have a mass of material from which undoubtedly a great number of facts of the greatest scientific importance could be gleaned. Impressed with this idea, we have given an account in this journal⁽¹⁾ of the articles of Doctor Arnaudet, of Corneilles, on the etiology of cancer in Normandy. M. Guelliot, in the *Union Medicale du Nord-Est*⁽²⁾, has resumed these studies, and assured himself the assistance of all the physicians of that region. Having presented to our readers an analysis of the first results of M. Arnaudet's study in the *Normandy Medicale*, so we shall present them with a succinct resumé of the articles published by M. Guelliot in the *Union Medicale du Nord Est*.

The first question to be solved is this: "Is cancer contagious?" The ancients believed it contagious like tuberculosis, and just as for tuberculosis these empirical, and in many places popular beliefs, were very much neglected by the anatomo-pathological school, which troubled itself but little about the pathogenic side of the disease. The works of Ledoux-Labard 1881⁽³⁾ and of Blyth⁽⁴⁾ have called attention to this point; the auto-inoculability of cancer has long since been clinically established. It was therefore its inoculability from one individual to another which required demonstration.

(1) Tribune Medicale.

(2) Union Medicale du Nord-Est, 1891.

(3) Ledoux-Labard, Le Cancer Maladie Parasitaire. *Archiv Gener de Medic*, 1885.

(4) Blyth, on the Contagion of Cancer. *Lancet*, 1888.

It is clear, as has been remarked by Andrews⁽¹⁾ and by Guelliot, that the greatest number of cancers are superficial, that the irritative lesions, the ulcerations of smokers, lupus epitheliomatus, have a certain relation to cancer, are of a frequency whose great importance can not be denied. But if, in these cases, an external contagion can be admitted, its transmission is not directly observed; it is, however, different in the cases of cancer of the genitals of two people united together by marriage; M. Guelliot cites ten authors who have reported observations of this kind. If we take the cases in which cancer appeared in married people, or in relations, without selection of organs, although notable to find the close bonds which unite—for example, a cancer of the uterus and an epithelioma of the penis—we find quite a quantity of epitheliomas in the family. The article of Dr. Arnaudet, of Corneilles, which we have already analyzed in this journal; that of Dr. Guelliot, based on an investigation made of a series of physicians in the environs of Rheims, are filled with facts of this kind, almost all relating to cancer of the stomach; thus Arnaudet attributed the principle rôle in the diffusion to the *cancerous germ*. In married persons we encounter dissimilar tumors, like sarcomas, epitheliomas, situated in different parts of the body. Here the problem is not quite so closely drawn and the number of cases are more numerous. It is the same in the observations of cancer appearing successively in persons who are in daily contact. Guelliot reports a case of this kind, where four persons, three of whom were not at all related, are all attacked with cancer in less than five years.

M. X. died on the 22d of November, 1870, after long suffering caused by a cancer of the anal region. Madame X. develops a cancer of the breast, to which she succumbed the 7th of March, 1873. A servant who had attended both died a few days later, March 30, 1873. Finally the father of Madame X., who lived with his daughter, and who had hitherto enjoyed excellent health, is attacked with a cancer of the rectum, which caused his death on March 5, 1875.

A certain number of practitioners do not admit the direct contagion of cancer, but they are partisans of heredity, and these hereditary antecedents reproduce themselves with sufficient frequency, so that in the observations of direct contagion it is indispensable to set forth, with all detail, the hereditary antecedents of cancerous married couples. How-

(1) Andrews, Journ. Americ. Med. Ass., 23d November, 1889, p. 738, Localisation of 7,881 Primitive Carcinoma.

ever, even very limited criticism of observations does not lead the statistician to regard this heredity as frequent as the classic authors would have us believe.

After heredity, after direct contagion, comes a third question whose importance, for certain parasitic maladies, malaria for example, is recognized to-day as taking precedence of all the others: The influence of external media and of topographic causes.

In the hospitals of Paris satisfactory statistics on this point can not be obtained. The population there is too floating, but country physicians have frequently remarked that cancer did not prevail with equal intensity in all parts. It seems to avoid the water courses of living water and to affect more the plateaus. Arnaudet noted this for the plateaus of Normandy, and the investigation of Guelliot revealed the same fact for the chalky plains of Champagne. In certain clienteles cancer of the stomach is so frequent that the annual mortality by it can be estimated at 14 per 1,000; the mortality from cancer in Paris and Rheims is not greater than 1 per 1,000. A physician practicing on the swampy plateau of Rockroy, has observed in a miserable locality, whose inhabitants, badly nourished, drank nothing but water, a great number of dyspepsias, which, after a certain number of years, gave way to well-marked cancer. In the village just referred to, and which has 310 inhabitants, there have been in the last forty years 33 deaths from cancer, and of these 22 were cancer of the stomach. *En resume*, the inequality of the distribution of cancer, its frequent development on parts of the body easily accessible to contagion, the epidemic character which it presents in certain houses, all this may lead us to believe in the inoculability of cancer. The results of the inquiry instituted by M. Guelliot among his colleagues in the environs of Rheims are not all in absolute agreement; they have, however, the characteristic of great sincerity; it is an impartial inquiry, and presents us such curious, such striking statistics that undoubtedly stimulates to further pursuit in this direction. In extending it to the whole French territory, in calling upon all and every practitioner to give his clinical experience, we shall obtain statistics that will make us more familiar with this difficult question, and show us where the problem should be attacked with the greatest chances of success. The press therefore should lend its aid to such attempts as those of Arnaudet and Guelliot.—*La Trib. Medicale*.

Selections.

The Types and Treatment of Intermittent Fever.

BY ROBERT C. KENNER, A.M., M.D.

Read before the Hardin County (Ky.) Medical Society, September 3, 1891.

Within the last thirteen years I have treated more than three thousand cases of all forms of intermittent fever. These were seen in the most malarious portions of Kentucky and Arkansas.

I have taken careful notes of these cases and have arrived at the conclusion that there exist several types of this disease, which I shall briefly describe.

It is not my intention to give an extended review of the therapeutics of intermittent fever. This would be most interesting and would acquaint one who had not read medical literature with many curious facts and practices. But the limit of this paper forbids this altogether, and I shall therefore confine myself to those remedies which I have found of the most substantial value.

In this paper I shall only consider the means of intercepting future paroxysms, leaving the treatment of the issues of the paroxysm itself untouched.

While the paroxysms may be essentially alike and have their origin immediately or remotely in the same cause, the practitioner is confronted daily in practice with *several distinct types of this fever*.

In other words, we constantly meet cases in which, while they are alike as to form, there are symptoms and conditions of the system accompanying the one that are wanting in the other, and measures that will speedily cure in one case will utterly fail in another. It is one of the primary objects of this article to define as clearly as possible the symptoms and conditions which constitute and differentiate these types. My experience leads me to look upon intermittents of the quotidian, quartan, or any variety, as assuming according to the state of the system four different types, and the treatment to be largely successful in warding off future paroxysms must be adjusted on the basis of this differentiation of the types. Intermittent fever is no more

necessarily the same in two or three cases in practice than so many cases of pneumonia or typhoid or scarlet fever.

The types of intermittent fever met with in practice may be classed in this order: (1) That which is attended with that condition known as "biliousness" in its most marked form. Plus the fact that the patient has had an intermittent paroxysm, "the complexion is muddy, the conjunctivæ are yellow, the tongue is heavily coated with a yellowish-white fur, a bitter taste persists in the mouth, the breath is heavy in odor, even fetid,* there is generally a disgust with food and more or less obstinate constipation. If the bowels have acted, they have generally done so imperfectly, and the dejections are clayey or yellow in color. There is frequently retching and vomiting. Vomiting is very often an annoying symptom. This type I have observed occurs *only* in those patients who have resided in *very* malarial districts, those who live close to stagnant streams or pools, or near the banks of a river which is low or overflows and inundates the adjacent lands. It seems that malaria formed in a locality of this kind is necessary to the production of this type. This type of intermittent fever formed ten per cent. of the cases of which I have notes. (2) The second type is that one in which the accompanying symptoms of "biliousness" may be present, but to a much less extent, or even, as they often are, entirely absent. The tongue is usually more or less coated, though it is many times perfectly clean. The bowels are generally constipated, but frequently it is only to a slight extent, and sometimes there is diarrhea, with a red, "beefy" tongue. The ruddy complexion, and other symptoms of the preceding type, may be present in a less marked manner. The patient generally gives a history of malarial exposure, though he is often unable to make it out, and as a rule he has not been subjected to as virulent a degree of poison as the class who present cases of the first-named type. The febrile action in the hot stage will run as high, and the other stage will present no distinctive differences from ordinary intermittent fever, only that the first-named type may be attended with more gastric irritability and other symptoms of "biliousness." This type is the one ordinarily met with in practice. (3) The third type is where the paroxysms have persisted long, and the patient has malarial cachexia. The patients are those who have been exposed to the action of the malarial poison for a long period, and who have had

* The words in quotation marks are from Bartholow in Pepper's System.

paroxysms regularly, in some cases for six months and a year. The patients are anemic and usually have enlargement of the spleen and liver, with more or less dropsy. There is often bronchitis and diarrhea, and this type has been mistaken for phthisis. The paroxysms are often masked, the cold stage is frequently but feebly expressed, and sometimes omitted entirely. The patient suffers from neuralgia, and gradually becomes weaker until he succumbs, unless the treatment is successful.

The fourth type is the one in which the paroxysms seem to recur from *habit*. Its history is one usually marked by more or less continued exposure to the poison and neglect to employ remedies in proper time and manner. The patients are generally more or less anemic, but present nothing like the depraved physical condition of those having malarial cachexia. It is seen mostly in those persons who have undertaken to treat themselves, or have resorted to the various nostrums until the system has become impoverished to a degree, and when the physician orders quinine taken in the interval he finds it unavailing. Even after removal to a healthy neighborhood the chills will recur.

While in this connection, it will not be out of place to speak of the importance of satisfying one's self that the patient has intermittent fever. Chronic pleuritis, hepatic abscess, abscesses, hysteria, hectic fever, and other diseases simulate intermittent fever very closely. Prof. Andrew H. Smith, of New York, recently reported a case of malignant endocarditis which simulated intermittent fever very closely.* Graves, in his *Clinical Medicine*, lays particular stress on the importance of diagnosing intermittent fever, and details a case of hectic fever which had been denominated intermittent fever by several able practitioners of that day.

In the *treatment of the first type* of cases, nothing is so important as the timely administration of the compound extract of colocynth alone, or in combination with calomel. Without regard to the time of the next recurrence of the paroxysm, I usually give it in doses of from ten to fifteen grains, repeated every eight hours, till the tongue has cleaned off and the symptoms of biliousness have entirely disappeared. Should the paroxysms recur after this has been effected, quinine will have to be resorted to. But it is not, according to my experience, good practice to give quinine at the beginning of this type of cases. I have never seen a

* See Medical Record, July 30, 1887.

case that was clearly defined of this type that would not readily yield to this treatment. When gastric irritability complicates this type, the mild chloride of mercury should always be combined with the colocynth, otherwise it is not always necessary.

In the second type of cases we are called to treat the ordinary expression of the malarial poison. This is the form in which quinine acts as a specific as much as any drug acts under the circumstances. Given properly it is almost an antidote. I have found it best to give the antiperiodic in five doses, of four grains each, beginning six hours before the paroxysm is expected, and given hourly until all five doses are taken. The last dose of the quinine will, of course, be taken an hour before the time that would be occupied by a chill. I have no reason for believing that the antiperiodic virtues of quinine are increased by giving it in one large dose, as Hertz and others advise. I order the antiperiodic taken as stated above, for three consecutive days. It is given with advantage in this manner, over the practice of giving what we consider the antiperiodic quantity at any time in the interval. One reason is, that during the time quinine is being taken we can keep the patient indoors till the time of the chill has passed, while if it is taken in the sweating stage, the patient might go out, unduly expose himself, and bring on the paroxysm. Then, given in this manner, we are more assured that the malarial poison is neutralized; besides, the production of cinchonism for three consecutive times will make the chances for the return of the chill almost inconsiderable. The experience of several great observers would seem to confirm this position. Professor Flint declared the chances that cinchonism produced in the interval would ward off a recurring attack was about equal with failure. It would seem that Professor Loomis favors this plan of producing several cinchonisms. He says: "Having prevented the recurrence of a second paroxysm, it is important that a moderate degree of cinchonism should be maintained for a number of days by the daily administration of quinine, in moderate doses, about two hours before the time of day at which the first paroxysm occurred; ten to fifteen grains should be daily administered."* I have found the antiperiodic given in the sweating stage often produced vomiting. But granting that it will not produce even nausea, the fact that the patient might go

* Loomis' Practice of Medicine, p. 116.

out and bring on another paroxysm is sufficient, together with the fact that no advantage would be gained, to condemn the practice. Since I have begun to give the antiperiodic later in the interval my success has been greater. My experience has led me to the conclusion that quinine given in solution is not more certainly antiperiodic. Fluids, it is well known, are more easy of absorption than powders, yet we are not on this score to ignore making our prescriptions palatable. The exhibition of quinine in capsules is a practice open to no objection if they are soluble. I have never had cause to regret using the drug in this manner. To give it in freshly made pills is also a good way. When the stomach is irritable I order two grains of oxalate of cerium with each dose of quinine. When the agent is to be given to children, I have ceased prescribing it in any other way than in the aromatic syrup of yerba santa when it can be taken by the mouth at all. It completely disguises the taste of the drug and makes it so palatable that children like it. When it is not advisable on any account to give it *per os* or *per enema*, it can be given hypodermically with advantage. Given in doses of six grains hypodermically, I have found it equal to twenty taken *per os*. When there is furred tongue, and other symptoms of biliousness, colocynth and calomel should be added to the treatment.

Sternberg ascribes the oxytoxic powers often attributed to quinine to a misconception. I have often given women advanced in pregnancy full doses of quinine, and have never had the least reason to regard it as an abortifacient. Malarial fevers often produce abortion, and this is how the drug came to be looked upon as an exciter of uterine contractions. *Cornus florida* (dog-wood), given as before outlined, may be used. So also may the kindred alkaloids of cinchona and the remedies mentioned above. Fifteen or twenty grains of the bromides of potassium or sodium given during the time quinine is being taken will entirely relieve the unpleasant effects of cinchonism, such as tinnitus aurium, etc. This also lessens the tendency to nausea and vomiting. Such good results follow it that I almost follow giving it in a routine way, and never fail to give it when the patient complains of the unpleasant effects of cinchonism.

In the third type removal from the malarial surroundings is imperative. The patient's general health must be looked after. Cod-liver oil, arsenic and iron are the remedies which will afford the best results. Diarrhea, bronchitis,

and whatever complications may exist will demand special interference suitable to the particular case and not possible to outline here. Arsenic should be given until the symptoms of arsenical poison in the edema arsenicalis appear. Quinine should be directed against the chills or elevations of temperature for one month, if that long be necessary to dissipate them.

The fourth type, which is seemingly *habit*, calls for treatment somewhat different from the other varieties. There are several remedies which render us substantial good in these cases, and which may be relied on with confidence. The patients should be put on tonics, such as iron. I frequently prescribe tr. ferrichlor. in combination with liq. arsen. chlor. with the most satisfactory results. The best means to arrest the paroxysms are those agents which impress the nervous system. The bath of cold water is an excellent measure, used as above directed. Opium in full doses, one hour before the expected paroxysm, is one of the surest means of curing this form. It is well often to combine capsicum or piperine with the opium. Opium should be given for at least three consecutive days, or may be longer.

When the chills recur every fourteen or twenty-one days, quinine in doses of five grains, given for a period of four weeks, generally succeeds in my hands in curing them.—*Med. Progress.*

British Medical Association.

FIFTY-NINTH ANNUAL MEETING, HELD AT BOURNEMOUTH.

T. Lauder Brunton, M.D., D.Sc. Edin., LL.D. Aber., F.R.C.P., F.R.S., delivered the "Address in Medicine," in which he took up the changes in the medical profession in the last twenty-five years.

He noted that a great increase had occurred in the knowledge of the nature, causation and treatment of diseases, and a greater gain in the general adoption of the experimental method by which most of our recent knowledge has been acquired, and from which we may hope even greater advantages in the future. There is also a corresponding alteration in the teaching of medicine, in that instruction is practical instead of theoretical.

He referred to the profound influence that the doctrine of

evolution had exerted upon medicine, as a subdivision of biology. As to the changes that had taken place in medical students he stated that there is no other class in which one can find so many gentlemanly, thoroughly well-educated and hard-working men. The struggle for professional existence has become a severe one. Its cause is to be found in the excessive number of men who have been entering the profession notwithstanding the barriers raised by the entrance examination; for this very barrier, by raising the quality of the men, has naturally raised the estimation in which the profession is held, and has, therefore, made it more attractive. But the excessive severity of the struggle, on the other hand, has a tendency again to lower the profession by rendering it so difficult for medical men to make a bare living that they are sometimes tempted to think more of their fees than of the welfare of their patients, and occasionally to resort to such means of making money as tend to bring discredit both on themselves and on the profession to which they belong.

Long ago the doctor's means of diagnosis consisted in inspecting the tongue, feeling the skin, counting the pulse, shaking the urine, and looking at the motions and the sputum. But now, in addition to a thorough training in auscultation and percussion, students have to learn the use of the laryngoscope, ophthalmoscope and oescope, and the application of electricity. They have to acquire a knowledge of the chemistry of the urine and its alterations in disease, and, what takes still more time, they have to learn the microscopical appearances, not only of the tissues and excretions in health, but their alterations in disease, and must be acquainted with the methods of staining so as to detect tubercle bacilli and other disease germs.

Increased knowledge of diagnosis has led to an apparent change in the mortality of different diseases. Thus, the frequency of death from heart disease appears to be much greater and that from apoplexy much smaller now than fifty years ago. In all probability this difference is not real, but only apparent, and is due to the more accurate diagnosis by which the presence of cardiac disease is now ascertained. The supposed increase in the frequency of carcinoma is probably in great measure due to a similar cause; for it is probable that many cases which were formerly classed as chronic diarrhea, dysentery, jaundice or dropsy, depended upon malignant disease, while others probably depended

upon unrecognized disease of the kidney, for until recently little attention was paid to the condition of the urine.

But real changes, as well as apparent ones, have occurred in diseases. Some have become more frequent and others are rarer. Thus, typhoid fever is almost certainly more common, because the increase of our sewage system has given greater facilities for its spread. Typhus fever, on the other hand, has become comparatively rare. Pyemia is another disease which, although not totally extinct, is very greatly lessened in virulence.

The departments in which the greatest advances have been made within the last five and twenty years are those of fevers and diseases of the nervous system. A new era in the study of the latter was foreshadowed by the experiments of Fritsch and Hitzig on the brain of the dog, but it can only be said to have fairly begun with Ferrier's localization in the brain of monkeys of the cortical centers, both motor and sensory, for the brain of the dog was too unlike that of man for experiments upon it to be of much practical use in the diagnosis of human ailments, while the likeness in the brain of the monkey to that of man at once allowed conclusions drawn from the experiments upon the former to be transferred to the latter. Yet if we try to describe in one word the department in which medicine has made the greatest progress within the last quarter of a century, that word must be "fevers"; for during this time we have learned to recognize fever by the use of the thermometer in a way we never did before; we have learned the dependence of the febrile process in the great majority of cases upon the presence of microbes in the organism, and we have become acquainted with an immense number of chemical substances that have the power both to destroy the microbes and to regulate the febrile process.

Though previously used, it is only within the last five and twenty years that the use of the thermometer has become at all general. The constant employment of the instrument shows when the temperature of a patient is rising so high as to be dangerous, and affords an opportunity for the use of antithermic measures, such as cradling, cold sponging, cold affusion, cold baths, or by the administration of antipyretic remedies.

The thermometer has not only enabled us to detect the onset and to watch the progress of fever, but in conjunction with microscopical research, physiological experiment and

chemical analysis it has enabled us to gain a fuller knowledge of the nature of the febrile process itself. We know that during it the organism is consuming rapidly, like a candle burning at both ends. We have learned also, to a great extent, the necessity for the elimination of the waste products, or ashes, as we may term them, which the excessive combustion produces, and thus we know why the surgeon is so anxious regarding the result of an operation when the kidneys of his patient are inadequate. For if any febrile attack following the operation should lead to increased demands upon these secreting powers, they might fail to meet it, and the retained excreta would poison the patient.

The rapid increase in our knowledge has been due, not merely to the constant use of old methods, but to the introduction of new ones. The greatly increased powers of the microscope and the better methods of illumination have been of the greatest service, but their utility would be very much less than it is had it not been for the general introduction of the microtome and the invention of new methods of staining. The facility with which sections are made by it has made microscopical research much less tedious, and has enabled trained histologists to do more work in a given time, and medical students to acquire knowledge more rapidly. But without the method of staining introduced by Weigert and Ehrlich, we should, even with the best microscopes, be unable to recognize most of the microbes that are so important in the causation of disease.

The next step in progress was Koch's utilization of transparent gelatin as a culture medium. It thus becomes possible, from day to day, to study the growth of the germs and to make pure cultures. In this way it became possible to study the life-history of the organism, the influence of soil, temperature, moisture, and other influences upon its growth, and the effect of one organism upon another, when both are grown together. Thus it was found that certain germs were not compatible with one another, while others rendered the soil favorable for the development of still others. Then there is also a conflict between germs and cells that is apt to be influenced by external conditions. In this may be included the phenomenon of phagocytosis.

This process of phagocytosis is now regarded by many as only a small part of the struggle between an organism and a microbe, but it is impossible to see part of a microbe half-digested by the cell in which it is imbedded, while the out-

side half remains unaltered, without believing that the process is one of great importance. At the same time, it seems that the process of phagocytosis, where the microbe and the cells meet in close conflict, bears about the same relationship to the total struggle that a bayonet charge bears to a modern battle. The main part of the fight is really carried on at some distance by deadly weapons, by bullets in the case of the soldier, and by ferments, poisonous albumoses, and alkaloids on the part of the cells and the microbes.

In the last few years increasing attention has been paid to chemical investigation of the ferments and poisons produced by microbes.

It is now possible to separate the albumoses and poisons from the microbes which produce them, either by filtration or by destroying the microbes by graduated heat; for, as a rule, they are destroyed by a lower temperature than the albumoses or poisons which they form.

As the albumoses produced by microbes are nearly allied, chemically and physiologically, to those formed in the alimentary canal of the higher animals by digestive ferments, it is natural to suppose that microbes, like the higher animals, split up proteids, starches and sugars by enzymes, which they secrete, and which in both cases may be obtained apart from the living organisms which produce them; that, in fact, we should be able to isolate from microbes bodies which correspond to pepsin or trypsin, just as we can isolate these from the stomach or pancreas of an animal. In some, although not in all cases, this attempt has succeeded.

The albumoses produced by microbes resemble those formed during normal digestion in being poisonous when injected directly into the circulation, although they may not be so greatly absorbed from the intestinal canal. One of the most remarkable discoveries in regard to albuminous bodies is the fact that some of them which are perfectly innocuous, and, indeed, probably advantageous to the organism in their own place, become most deadly poisons when they get out of it.

It is possible that one form of albumose may neutralize the action of another, thus rendering both innocuous, while either alone may be a deadly poison.

Perhaps a similar process of splitting up and recombination may explain the formation and disappearance of the enzymes, such as pepsin and trypsin, by which digestion is carried on. The pancreas of a fasting animal will not digest

albuminous bodies like fibrin, while the pancreas of an animal killed during full digestion will do so rapidly. Yet the fasting pancreas contains the zymogen, or mother-substance, which yields the digestive ferment, and, as Kühne has shown, by treating it first with acid and then with alkali, it becomes active. Lépine has lately shown that while the pancreas is pouring into the digestive canal a ferment that will form sugar, it is at the same time pouring into the circulation another ferment that will destroy sugar.

Immunity is probably a complex condition, not dependent upon any single factor. If a microbe has gained an entrance into an organism, and produces a proteid or an albumose poisonous to the organism which it enters, it may grow, thrive, and destroy that organism, while the injection of some other proteid that would neutralize the poison might save the animal while the microbe would perish.

Hankin has found that while a mouse inoculated with anthrax will die within twenty-four hours, a rat resists the poison altogether; but if the mouse, after being inoculated with the disease, has a few drops of rat's serum injected into it, instead of dying, as it otherwise certainly would, it survives just like the rat; from the spleen of the rat Hankin has isolated a proteid that has a protective action similiar to that of the serum.

Injections of goats' blood and of the serum of dogs' and of goats' blood have been applied to the treatment of tuberculosis.

It is possible that the good derived from blisters is dependent not only upon an influence exerted upon the circulation, but also upon a sort of endermatic administration of proteid matters derived, no doubt, from the blood, but altered in their passage from the vessels to the surface of the skin, so as to have an effect upon the body entirely different than if they had remained in their ordinary place.

It is possible, too, that the good effects of bleeding may be due to a similar cause. Experiments upon animals have shown that withdrawal of blood from the veins causes absorption of proteid matters from the tissues, and these may have an action of their own upon the blood and tissues generally with which they are thus brought into contact. Indeed, it is possible that free purgation may act in the same way.

Paré rendered surgery a great service when he prescribed the application of ointments to wounds; but Lister rendered

a greater when he recognized that the danger of operations was due to the entrance of germs and, by preventing this, he has completely revolutionized surgical practice; nay, more, he has, to a great extent, revolutionized medicine, for the diseases of the internal organs that were formerly entirely under the physician's care are now becoming amenable to surgical treatment, and diseases of the stomach, intestine, liver, kidney and lungs, and even of the brain and spinal cord, are now successfully treated by surgery when medicines are are powerless to help.

Not only in surgery, but also in infectious disease, has the recognition of disease germs as a source of danger to the organism led to their destruction outside the body and insured safety from their attack.

So long as people were ignorant of the cause of epidemic diseases, they were utterly unable to combat them; but once an epidemic is known to depend upon the presence of a certain organism, precautions can be taken for destroying the organism outside the body by means of disinfectants, or by inoculation lessening the susceptibility of the organism to its ravages inside the body, or combating its effects by means of antipyretics.

In comparing the drugs at our disposal now with those we possessed twenty-five years ago, we are at once struck by two facts, namely, that we not only have a very much larger number of powerful remedies than before, but that we also know better how to use the old ones. Both of these gains we owe to experimental pharmacology, to the testing of drugs upon the lower animals.

Every now and again a loud outcry is raised against vivisection, partly from ignorance and partly from prejudice. Many—probably most of those opposed to experiments on animals—are good, honest, kind-hearted people, who mean well, but either forget that man has rights against animals as well as animals against man, or are misled by the false statements of the other class. These—namely, those who, blinded by prejudice, regard human life and human suffering as of small importance compared with those of animals, who deny that a man is better than many sparrows, and who, to the question that was put of old, "How much, then, is a man better than a sheep?" would return the reply, "He is no better at all"—such people bring unfounded charges of cruelty against those who are striving, to the best of their ability, to lessen the pains of disease both in man and also in animals.

To experimental investigation in animals we owe, in addition to other valuable information, in great measure, our power to lower temperature, for to it is due not only the introduction of new antipyretics such as salicylate of soda, antipyrin, antifebrin and phenacetin, but the extension of the use of quinine from a particular kind of fever—malaria—to other febrile conditions.

Perhaps the most promising thing about pharmacology is that we are now just beginning to gain such a knowledge of the relationship between chemical structure and physiological action that we can, to a certain extent, predict the action of a drug from its chemical structure, and are able to produce new chemical compounds having a general action such as we desire—for example, anesthetics, soporifics, antipyretics and analgesics.

But the excessively rapid development of medicine and medical science requires that those who are entering the profession should not only be taught the things that we know now, but should be so trained as to enable them to keep more or less abreast of medical progress. This can only be done by giving them a thorough grounding in chemistry, physiology, general pathology and pharmacology; and this training must be essentially of a practical nature, not only in the way of demonstrations, but of actual work on the part of the student himself.—*Phil. Med. News.*

Tonic Reconstituents.

Dr. A. Lutaud, of Paris, has recently published a paper entitled as above. We quote as follows: "The fundamental basis of all rational therapeutics must be to restore the tone and reinforce the power of resistance of the tissues. The organism must be placed in a condition to resist vicissitudes of temperature, humidity, etc., and to resist the attack of the enemies in the form of the pathogenetic microbes, which lie in wait for victims. It is, above all, necessary to prevent that devitalization of the tissues which renders them an easy prey to the marauding bacillus. Among these remedies, and occupying by common consent the first rank, is one the origin of which it may be interesting to trace.

"This drug is coca, which, under the designation of erythroxyton coca, was first introduced into European therapeutics by Mariani in 1863.

"Mantegezzi considers coca to belong to the class of 'nerve foods,' at the same time regulating and reinforcing the action of the heart. Professor Gubler, who took up the study of the pharmacology of the coca plant at the same time as Mariani in 1863, is of opinion that coca confers a potential energy on the nervous system, partaking of the nature of a fulminate, but with this difference, that this provision of energy is expended little by little instead of all at once. According to other observers, the anæsthetic properties of the plant, which are well marked on the mucous membrane of the mouth, extend to the stomach, and thus the sensation of hunger is abolished.

"Now that more recent researches have placed the physiological and therapeutical properties of the plant on a sound and scientific basis, these theories have become established facts.

"Coca acts in two ways: First, by imparting a tonic principle to the nervous system (Gubler); and, secondly, by *anæsthetizing* the mucous membrane of the stomach. We are enabled in this way to explain the remarkable properties of erythroxylon coca, not only as a nutritive and reconstituent agent, but also as an anæsthetic of the mucous membranes.

"When Mariani completed his first series of experiments, now more than twenty-five years since, he particularly insisted on the fact that coca possessed not only the stimulating and dynamic properties of the cinchonas, but it also acted as a direct sedative in dyspepsia. The success which followed the use of his Vin Mariani in all the affections of the stomach of which *pain* was a prominent symptom, has since amply confirmed the accuracy of his earlier observations. While other tonics are found to produce constipation, and, moreover, badly borne by dyspeptics, Mariani Wine proved eminently successful in all cases in which the stomach was irritated or inflamed. This naturally led to its being looked upon as a specific in many cases of dyspepsia, and in the treatment of the incoercible vomiting of pregnancy.

"In every case it has now been conclusively shown that Vin Mariani is not a medicated wine of the ordinary kind having for effect to tickle the palate of the patient and to afford a passing stimulus in virtue of the alcohol it contains. Coca possesses, in a minor degree it is true, but nevertheless does actually possess, the analgesic properties of the alkaloid cocaine. Brought into direct contact with the irritated and

inflamed gastric mucosa, it exerts its double action as stimulant and sedative. It increases the activity of the mucous and peptic glands; it facilitates the various chemical changes necessary to the assimilation of food, and, at the same time, in virtue of its sedative effect, it subjugates the *pain* which is so common a symptom in indigestion.

"Coca wine, therefore, is admirably adapted for the use of dyspeptics, as well as of anemic and debilitated persons.

"It is, however, more particularly indicated in that numerous category of sufferers from laryngeal phthisis associated with dysphagia. These unfortunate persons suffer untold pangs in consequence of their inability to perform the indispensable act of deglutition. Vin Mariani ends itself, as no other remedy does, to the relief of these distressing symptoms, for it not only gives a temporary staying power to the organism, but, by rendering possible the ingestion of solid food, it permits of a more durable amelioration. This fact has been insisted upon by one of the most distinguished French laryngologists, Dr. Ch. Fauvel."

Pure Phosphorus in the Diseases of the Nervous System.

BY BAT SMITH, M.D., COLUMBUS, TEX.

A distinguished author has truly said, "The tendency of the times is to precision and accuracy;" and, indeed, is he a bold man who, in this day, would advance an hypothesis, without being able to demonstrate his theory, well supported by facts. Recognizing the fallacies which might lead to erroneous deductions from theories too dogmatic in character, it is not the intention of the writer to enter upon a discussion relative to the general properties of phosphorus, either as a chemical or therapeutic agent. I only ask a careful consideration of the few facts as they appear below.

The following cases came under my observation some years ago; and, while my experience with phosphorus is yet too limited to determine with accuracy its value, as compared with other therapeutic agents, yet the results obtained in these instances may furnish some data which may prove of interest.

CASE I. A lady, aged about thirty-five years. The family history gave no evidence of tuberculosis or scrofula. For

thirteen years she had suffered from locomotor ataxia. She complained of no pain whatever, there being simply a gradual wasting of the gluteal muscles, and especially of the flexor muscles of the legs, in particular the biceps, semi-membranosus and semi-tendinosus. She had a gliding motion, but was unable to lift her foot from the floor. Upon careful examination I found no sugar in the urine, of albumen scarcely a trace; the phosphates, however, were in larger quantities, and the phosphoric acid passed in twenty-four hours in an enormous amount, considering the weight of the patient (ninety-two pounds). The phosphoric acid passed in the twenty-four hours varied from forty-eight to fifty-six grains. Her appetite was fair, and digestion seemed to be good. She assured me she had been under treatment for some years without benefit, and that her powers of locomotion were becoming worse from day to day.

She was put upon a treatment of pure phosphorus, one-twentieth of a grain dissolved in oil of sweet almonds, three times daily; also one-tenth of a grain of the solid extract of belladonna was given morning and night. At the end of two weeks the belladonna was suspended and the phosphorus continued. About four weeks after the beginning of the treatment the muscles seemed gradually to enlarge, and the motion of the legs seemed much freer. The improvement continued, and at the end of six weeks the dose of phosphorus was diminished from one-twentieth to one-thirtieth of a grain. Shortly after this the drug was administered only twice daily, morning and night. At the end of six months the patient had so far recovered that she could get up and down stairs without difficulty. Ten months from the commencement of the treatment she had recovered the entire use of her legs, being able to walk as well as ever. Her weight had increased from ninety-two to 126 pounds. Two years afterwards she wrote to me, stating that she feared a return of her former affliction, and asking that I should send her some more of the medicine. She was placed under the same treatment, and the results were entirely satisfactory.

CASE NO. II. A Mr. S., twenty-five years, applied to me for some bromide of potassium, stating that he was subject to epilepsy, and that this drug alone gave him relief. Upon inquiring into the cause of these epileptic attacks, I learned from him that he had had a sun-stroke when he was ten years old, and from that time he had suffered from epilepsy,

the attacks becoming more frequent as he advanced in age. He also stated to me that he had been treated by several specialists, but without benefit.

The analysis of the urine gave almost the same results as those obtained in case 1, with the exception that no trace whatever of albumen could be detected; bile, however, was found in considerable quantity.

The treatment resorted to in this case was one-twentieth grain of pure phosphorus three times daily. The preparation used with this patient was an elixir of pure phosphorus, prepared by Dr. Chas. Mohr, of Mobile, Ala., and is one of the most elegant preparations I have ever seen. The young man, the time he came under my care, was also suffering from chronic malarial poisoning; so, in addition to the elixir of pure phosphorus, I gave him a pill, three times daily, as follows: Quiniæ sulph., ferri carbon (Vallett's mass), each gr. iss, Strychniæ sulph., gr. 1-20. At the end of three weeks these pills were discontinued, but the elixir of phosphorus was kept up for nearly three months longer. Since that time, more than three years ago, that patient has had no return of the epileptic attacks, his general health has much improved, and he has increased considerably in weight.

CASE NO. III. Mr. G., aged thirty-five years. Some twelve years previously he had a severe attack of cerebro-spinal meningitis; his recovery, so he informed me, had been slow and tedious. At the time I saw him, he was also suffering from an attack from malarial fever. He complained of constant dizziness, and there was a marked uncertainty of gait, the patient not having complete control over the co-ordination of movement. The analysis of the urine gave results similar to those obtained in case No. 2. The treatment was the same as in No. 2. The results in this case were highly gratifying to the patient, as well as myself. Once or twice afterwards he complained of slight symptoms, similar to those described above, but a resort to the phosphorus remedy dispelled them.

It should be remembered that the various preparations of phosphorus are not here alluded to, the writer wishing only to refer to the value of phosphorus in its pure state.

Phosphorus enters largely into the constituents of the nervous tissues, the phosphorus fats forming fully seventy-five parts in one hundred of their composition; it is therefore not unreasonable to assume, that, under its administration, the existing malnutrition of these tissues should be relieved,

and the nerve power increased by supplying the enormous nerve waste.

I am not prepared to state in what chemical condition pure phosphorus enters the circulation; this point has, as yet, not been fully determined. That it is readily absorbed, there seems to be but little doubt. A part of it is taken up by the blood as uncombined phosphorus, owing to its solution by the alkalis of the intestinal fluids and fats; some portions, however, undergo various grades of oxidation; some phosphide of hydrogen and phosphoric acid are also formed.

I do not claim pure phosphorus as a specific in locomotor ataxia or epilepsy, yet I think the drug should be given a fair trial. Negative results have frequently been obtained, owing to the worthless character of the preparations used. Pills of so-called pure phosphorus are of no value, as they can not be made or kept without undergoing oxidation. The only reliable mode of administration is in the shape of a solution.

There are certain conditions which should be carefully observed by the physician in the administration of pure phosphorus; he should use great caution, and watch his patient closely. The drug should not be given just before, nor immediately after a meal, yet never on an entirely empty stomach. Upon the eructation of phosphoretted gases, the drug should be discontinued; also when it shows a tendency to produce diarrhoea; its administration must likewise be suspended when gastric disturbance occurs, as there is danger of producing a catarrhal state of the mucous membrane of the stomach.

Wegner (*Virchow's Arch.*, June, 1872) maintains that the continued administration of pure phosphorus has a great tendency to increase the development of bone; Kissel, of St. Petersburg, however, finds this not to be the case. The views of these two observers are so positively opposed, that the statements of both should be taken with some degree of allowance. Nevertheless, it seems, from well authenticated cases, that there is great danger of inducing necrosis of the maxillary bones, if carious teeth exist; this point should, therefore, not be overlooked.

Two symptoms which should always warn the physician that he can proceed no further with the drug, is the appearance of albumen in the urine, and jaundice, however slight this last symptom may be. This latter condition is probably

the result of resorption of the bile, caused by a catarrhal inflammation of the minute gall ducts, or by an inflammation of the mucous membrane of the common duct to such an extent as to offer an obstruction to the exit of the bile, or both.

When that peculiar condition of the skin known as phosphorodrosis, or phosphorescent perspiration, follows the administration of pure phosphorus, the drug should be at once discontinued.—*Daniel's Texas Med. Journal.*

A Country Doctor's Experience with Antipyretics.

BY R. S. GREGG, M.D., MANOR, TEX.

Read at Austin District Medical Society.

Having been requested by our worthy secretary to write an article on antipyretics, I will endeavor to give this society my experience with such of these agents as I have had sufficient confidence in to dispense to my patients.

Much has recently been written on antipyretics. Nearly all the articles which I have had the pleasure of reading have had very little to say about the "modus operandi" of these remedies, but only give their effects. Theoretically, I believe, they are supposed to act upon the nerve centers, especially the "heat center." Of course, this theory, like many others, can not be very well demonstrated. The effects of these drugs we can plainly recognize, and that they are very potent no one who has used them will deny. My experience has been with only a few of the many that have been given to the profession during the last five or six years. Antipyrin, antifebrin and phenacetin are the antipyretics that I am now, and have been using in my practice for several years. In talking with my medical brethren, I find much difference of opinion with regard to the effects of these agents. As this paper is intended to give my personal experience of each of them, I will give no hearsay evidence.

I think I have used antipyrin and antifebrin in about an equal number of cases. I have used them in malarial diseases, pneumonia, diphtheria, phthisis, and, in short, whenever I thought the high temperature was likely to do more harm than the remedies; for I must say, gentlemen, that I am convinced that we are only left to choose between the

lesser of two evils—these coal-tar preparations, or an excessive, prolonged, high temperature.

If we have a sudden, high rise of temperature, in a robust, strong patient, from a malarial fever, sun-stroke, or any acute inflammatory trouble, we confidently expect to relieve our patient with an appropriate dose of these antipyretics. But if our patient has been struggling with any of the exhausting maladies, such as typhoid fever, diphtheria, in fact, all such diseases as tend to death by exhaustion, we should use such remedies cautiously, if at all. We have had in our village during the last two months some eight or ten cases of typhoid fever, and it has fallen to my lot to treat several of them. In nearly all these cases I thought the high temperature called for an antipyretic. In several instances when I gave antifebrin, I had cause to regret it. In three of my cases the temperature was reduced to 97° , and my patient was covered with a cold perspiration, the pulse becoming exceedingly weak and rapid. Cyanosis was produced to an alarming extent in one case. I have never observed so much depression from antipyrin. Both act very freely on the skin, but antifebrin certainly has a much more depressing effect upon the circulation. It is becoming quite fashionable for persons, nervous, delicate ladies especially, who suffer from headaches, produced by whatever causes, to keep these drugs on hand and dose themselves with them. It is our duty as physicians to inform such persons that they are tampering with dangerous drugs.

Phenacetin I have used occasionally as an antipyretic, but more often as an analgesic. It certainly relieves pain more promptly, but as an antipyretic, I can not see that it has any advantage over antipyrin. It acts equally as much on the skin, and my patients complain of its depressing effects in about the same proportion. I notice that some physicians are prescribing quinine and one of these antipyretics in combination. In our continued fevers I do not like this mixture of the two drugs, to be repeated every two, three or four hours. It may bring about more depression than we expect, and the effect of the antipyretic may deceive us as to the course of the fever. After giving such a mixture, if a country physician rides eight or ten miles to see his patient and finds the temperature down to 100° , or even normal, and tells his patient that it will not be necessary to repeat his visit, he may feel rather chagrined to hear in a

day or two that a brother physician has been called to the case that he cured.

I now come to the antipyretic par excellence, which is cold water. I believe we have no agent which will reduce a high temperature so promptly, and with so little deleterious effect to our patients. I know there are some who think that this rapid cooling of the surface will induce a congestion of the important internal organs, but such has not been my experience. I have never had cause to regret the use of the cold bath. I have often put my patient, with a temperature of from 106° to 108° , in cold water, and have always found the temperature rapidly reduced, and have yet to regret doing so. Only a few days ago I was called to a Mexican child aged two years. The child had a chill about twelve o'clock, and when I arrived, about three o'clock, was having convulsions, and temperature in axilla registered $107\frac{3}{4}^{\circ}$. I immediately put him in a tub of tepid water, and commenced pouring cold water, fresh from the well, over his head, allowing it to run down into the tub until I had used four or five water-bucketsful, and had the water in the tub about as cold as the well water. He was in the water fifteen or twenty minutes, when I took him out and wrapped him in a woolen shawl. Convulsions had ceased, and entire surface felt cold. I took his temperature in rectum and found it $101\frac{1}{2}^{\circ}$. Such has been my experience in high temperatures in many of my little patients, and I only regret that the proper conveniences are so often wanting, in a country practice, for treating adults in the same manner.—*Daniel's Texas Med. Journal.*

GUNPOWDER STAINS ON THE FACE.—These may be removed by painting with biniodide of ammonium, distilled water, equal parts; then with dilute hydrochloric acid, to reach the tissues more deeply affected.—*Revue de Therapeutique.*

VOMITING OF PREGNANCY.—

R. Tincture iodi,
Chloroformi, aa. p. æq.

M. Sig.: Take five drops in a little water, at meal-time, morning and evening.—*Journal de Med. de Paris.*

Microscopy.

Some Few Facts in the History of the Microscope.

Dr. Geo. E. Blackham, of Dunkirk, N. Y., some time ago delivered an address, in which he gave a brief sketch of the history of the microscope. We feel sure that it will interest our readers very much if we quote a few facts from it.

The honor of being the first really scientific microscopist should no doubt be accorded to Antony Van Leuwenhoek, whose numerous highly important discoveries were all made with the most primitive instruments, constructed by himself, consisting, not of spheres and globules, but for the first time of a double convex lens, provided with arrangements for holding the object and regulating its distance from the lens. Of these instruments he appears to have made a great number, using each for one or two objects only, and with infinite labor, skill and patience investigating the new world thus opened to his view; thus discovering and describing many of the larger animalculæ, such as rotifers, vorticellæ, etc. His labors in the field of human histology were also very great and fruitful, including as they did investigations into the minute structure of the nerves, the discovery of the capillaries and the like; and when we consider the difficulties under which he labored, we may well stand amazed at the extent and general accuracy of his discoveries. Dr. Robert Hooker, however, was the first to use a COMPOUND MICROSCOPE consisting of a simple objective, a simple eye lens, and an intermediate lens, which latter, however, was inserted only to enlarge the field of vision, not to increase its power. An Italian, Eustachio Divino, constructed an instrument whose tube was "as large as a man's leg," and with an eye-piece "as broad as a man's hand," consisting of two plano-convex lenses joined with their convex surfaces, somewhat after the manner of Ramsden's positive eye-piece, used sometimes at the present day for micrometric work. This microscope could be drawn out to four lengths, giving magnifying powers of 41, 90, 111 and 143 diameters respectively. A few years later a compatriot, Fillippo Bonani, first made use of rack and pinion for purposes of adjustment, and of a substage condenser for improving the illumination. During the following century improvements

were constantly made in the construction and mounting of the "simple" microscopes, the most important being that of

THE IMPROVEMENT OF NATHANIEL LIEBERKUEHN.

Lieberkuehn was a citizen of Berlin. He placed his object lens in the center of a highly polished concave speculum, by means of which a strongly concentrated illumination is reflected upon the upper side of the object. This method of illumination, as adapted to the modern "compound" microscope, is still used with apparent satisfaction by some microscopists of the British school. Sir Isaac Newton was the first to propose a "reflecting" microscope; but little seems to have come either of his or of any of the numerous subsequent designs of this character. Indeed, with this instrument the great physicist was singularly unfortunate; for though he suggested monochromatic illumination as a means adapted to the correction of the errors arising from spherical and chromatic aberration, he more than offset this help by the publication of his opinion that a chromatic lens was a physical impossibility. But, as in this instance, so many times since have the dogmatic dicta enunciated by great and justly revered theorists been proved erroneous by the empyric achievements of subsequent investigators and laborers in practical affairs. [Only a very short time before it was actually accomplished, a distinguished member of the British Parliament stated that he would be willing to undertake the task of *eating* the first *steamship* that should succeed in crossing the Atlantic.—ED. MED. NEWS.]

Lieberkuehn also constructed the first "solar" microscope for projection of magnified objects upon large screens; and the same was equipped with the movable mirror to admit of its protracted use by a Mr. Cuff, of London, when Lieberkuehn first exhibited his invention. But the high hopes engendered by it were never realized, partly, no doubt, on account of its dependence upon direct sunlight, but more particularly because it can only display the shadow of things instead of the objects themselves.

THE OXY-HYDRO AND ELECTRIC LIGHT PROJECTING MICROSCOPES, which, though valueless for the purposes of original investigation, are of great use for the demonstration of certain classes of objects, to large numbers at one time. Baker also described a new invention for fixing the pocket

microscope [an instrument strongly resembling the toy, grandiloquently advertised and extensively sold several years ago as the "Craig" microscope], and giving light to it by a speculum, this instrument being originally intended to be used by holding it up to the light like a field-glass. A certain Mr. Marshall appears to have constructed the first compound microscope, according to our modern conception of the term, and of this various modifications were made from time to time, among which should be mentioned those of Culpepper and Scarlett, as well as those of the Adamses, father and son; which latter continued to be the *favorite instrument* until displaced by the "achromatic," which we owe to the demonstrations of Euler, the great Swiss mathematician, as corrected and seconded by the practical experiments of John Dolland, who demonstrated the corrective power of crown-glass refraction over flint-glass dispersion. Yet as late as 1821 we find the great philosopher, Biot, insisting that "opticians regard the construction of a good achromatic microscope as impossible," and at the same time Dr. Wollaston—the highest authority upon this subject then in England—gave it as his opinion "that the compound microscope would never rival the simple one," yet in less than two years thereafter, two French opticians, Seligues and Chevalier, produced the *reductio ad absurdum* of all this *a priori* theorizing in the shape of COMPOUND ACHROMATIC objectives, consisting each of two or more pair of lenses, each pair in turn consisting of a double convex glass; and four years later Amici, of Modena, produced an achromatic combination surpassing anything previously constructed in this line; and from that time on the principle of combining two or more lenses so shaped and adjusted as to correct each other's errors was firmly established. To the discoveries of Joseph Jackson Lester, and their practical application by working opticians, like Andrews, Ross and Smith, of London, we owe the production of compound objectives of wide aperture, flatness of field, and, above all, of highly perfected definition.

Improvements in making objectives followed in rapid succession. Amici and Hartnack [the latter a German living and working in Paris] utilized the immersion principle; aberration produced by the cover-glass placed over objects mounted on glass slides, corrected by Ross, of London; the angle of aperture increased to 135 degrees, which, for a long time, was held to be the largest attainable, etc.

During these improvements a young, untutored man, living in the backwoods of the State of New York, succeeded in making the finest objectives that had ever been made up to that time. He had a natural love for the science of optics. He was poor and was able to purchase but few books, so that the advances he made were the result largely of his own investigations. He taught himself to grind glass and make lenses, constructing his own tools. He has properly been termed the father of American microscopy.

He made a dry one-twelfth inch objective of 146 degrees of angle of aperture. With this glass he traveled on foot to West Point, carrying along a microscope-stand that he had made himself, the tube having been constructed with sticks of whalebone. He presented himself before Prof. Bailey with his rude stand and informed him that he could make lenses that could show the markings on diatoms that had never been resolved by any objective ever made. He produced a slide of mounted diatoms and requested the professor to resolve the lines on them with the finest and most powerful glasses he had in his possession. After a trial with his best English and French lenses, Prof. Bailey admitted that he could not discover any lines with them upon the diatoms. Young Spencer then took from one of the pockets of his homespun pants the objective he had made and placed it upon the whalebone tube of his stand, and requested the professor to take a view. Prof. Bailey did so and to his great astonishment found the diatoms covered with beautiful lines or markings.

The diatoms that were thus first resolved by the objective made by this young backwoodsman, who had taught himself to grind glass and make microscopic objectives that possessed resolving power not possessed by those made by the most skillful opticians of Europe, were called by the name of him who first demonstrated that their surfaces were marked by lines. They were given the name of *leurosigma Spencerii*. By this name they are known the world over.

Great improvements have been made in objectives since the time of Charles A. Spencer. Oil immersion objectives are made at this time with an angle of 180 degrees. The angle of aperture of the glass made by Spencer, to which we here allude, was 146 degrees—eleven degrees more than it was supposed could be attained.

Trichina Spiralis.

BY DR. H. M. WHELPLEY, PH.G., F.R.M.S.,

Professor of Physiology and Histology and Director of the Histological Laboratory of the Missouri Medical College; Professor of Microscopy in the St. Louis College of Pharmacy; Editor of the *Meyer Brothers Druggist*, etc.

CONTRIBUTED TO THE CINCINNATI MEDICAL NEWS.

The *trichina spiralis* is one of the most interesting of the entozoa (animals living within another). It is classified among the namatoid (thread-like) helminths (worms), and derives its name from a resemblance to a spirally twisted hair.

DESCRIPTION.—The individual worm as found in the flesh of animals is asexual and varies in size from 348 to 1270 micromillimetres (1-73 to 1 20 inch) long by 26 to 40 micromillimetres (1-960 to 1-640 inch) thick.

Trichinæ have been found in human beings, hogs, cats, dogs, rats, mice, badgers, hedgehogs, eels, moles and chickens. It is reasonable to suppose that they may occur in any carnivorous animals. After the animal has been infected with the parasite for a time varying from a few months to one or two years, the helminths become incapsulated with a hard, calcareous lemon-shaped cyst. This is probably a conservative act of nature to protect the muscle from the foreign body and the trichina remains passive in the process of encysting. Some authorities state that the cysts from human flesh can be distinguished from those found in hogs on account of having a nodule at each end of the capsule, but I have been unable to verify the statement. The worms may be present in flesh to the extent of over two hundred thousand to the cubic inch. During the stage of existence just mentioned the trichinæ are in a condition to live as long as their host retains vitality. After the death of the animal forming their home, the little fellows will survive many trials of hardships. Maceration in water does not affect them, even when continued for weeks. They have been known to survive a temperature of 165° F. and at twenty-five degrees below zero became quite active (probably in an endeavor to keep warm). The smoking or salting of the flesh does not insure their death.

DISCOVERY.—Authorities conflict in their statements regarding the discovery of trichinæ. It is probable that Professor Owen, of England, was the first to examine and describe the worm. The specimen was sent him from the dis-

secting or post-mortem room of St. Bartholomew Hospital, where the dissecting knives were dulled by the cysts. This was in 1834 or '35. It is also asserted that the ancients knew the parasite, and some hint that Moses was aware of their existence in the pork of that day.

Trichinosis, trichiniasis, trichinatus disease and trichinal disease are various terms used to designate the affliction caused by one animal eating the flesh of another containing trichinae. The disease was first described by Professor Zenker, of Dresden, in 1860. As soon as a person has eaten of flesh containing the parasites the digestive process sets them free in the stomach, from whence they pass to the small intestine. Here they become sexual within forty-eight hours,



Specimen taken from the deltoid muscle of a thirteen-year-old girl who died from trichinosis.

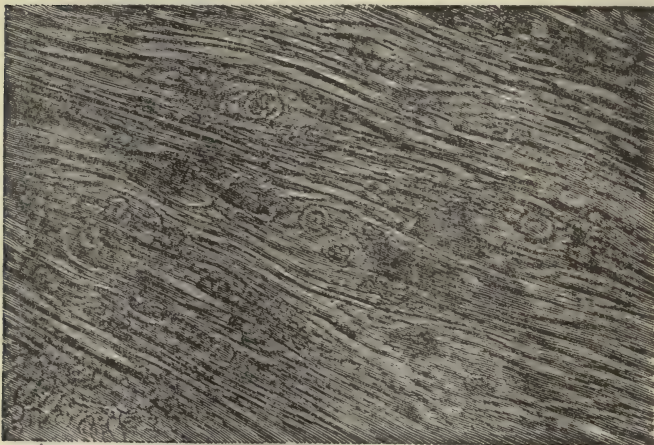
the female becoming slightly larger than the male. Within five or six days the females give birth to living young at the rate of one thousand to each female.

By this process a person who has eaten one-half pound of infected pork may become the unwilling host of thirty million small filamentous embryo within a few days. The animal causes intestinal disturbances which manifest themselves as abdominal pains, vomiting and diarrhoea. The growing young trichinae soon find their way into tissues and traverse the muscles to their tendinous terminations. The patient usually has an elevation of temperature at this time and it is not controlled by quinine.

Owing to the peculiar fibrous formation of the heart, the trichinæ never enter its substance and they are seldom found in any of the muscular organs. After the trichinæ have trav-



Another specimen from the same case. Length of the Trichina stretched, 1-30 inch, thickness 1-700 inch. Magnified 38 diameters.



Specimen taken from pork which caused the death of a girl and her mother.

eled as far as they can in the muscles, they curl up and remain quiescent until the flesh is disturbed by the death of the host. Pains similar to rheumatism may trouble the

patient the rest of his life. One attack of the disease does not render the victim proof against further invasions, and successive attacks may prove fatal when the first is outlived.

TREATMENT is not very satisfactory to either physician or patient. If the case is diagnosed in time, active cathartics and emetics will remove the young from the intestinal canal and lessen the dangers. Carbolic acid, benzin and other volatile liquids have been proposed and used, but without beneficial effect. Picric acid has been given until the patient was colored yellow, but the trichinæ did not mind it. This is certainly a case where an ounce of preventive is worth a pound of cure, and the best treatment is to make a microscopical examination of the meat before eating it, or else cook it thoroughly.

EXAMINATION OF MEAT.—The examination of flesh for trichinæ is by no means difficult. The trained eye can distinguish the cysts without the aid of a microscope. A lens with a power of ten diameters will show them plainly. When the trichinæ are free it requires a power of about forty diameters to make them out well. To study the animal necessitates much higher powers. A few fibers of the flesh can be picked out and squeezed between two glass slips, and then examined in this condition. A few drops of glycerin will facilitate the work. I have never found it necessary to stain the specimen or treat it with ether to extract the fats as some recommend. I make it a rule to keep specimens in glycerin, and see that the use of alcohol is avoided.

The diaphragm is as likely to be infected as any portion of the animal, and is a convenient muscle to examine.

The statement has been made that one out of every seven human beings are affected with trichinosis. At one time I examined twenty cadavers from a dissecting-room and found trichinæ in but one subject.

The above facts have been brought together on this occasion for the purpose of stimulating the pharmacists to prepare for the examination of pork.

The illustrations are from specimens prepared by Dr. Eugene A. Rau, of Bethlehem, Pa.

Mr. Willett asked: "What food will produce trichinæ in rats?"

Dr. Whelpley explained that trichinæ are transferred from one animal to another, by cats devouring mice and rats, or *vice versa*, mice and rats devouring cats or hogs.

Mr. Spilker asked in what section of St. Louis the rats on which the doctor reported in his paper had been obtained.

The reply was a twenty-five lot was obtained in the northern section, and an eight lot was obtained in the neighborhood of Morgan street.

Mr. Giesick inquired how it happened that in a family sick from trichinæ, two or three would die and the balance get well.

Dr. Whelpley replied, for the same reason that two or three children in a family sometimes die from whooping-cough and the balance get well.

Gleanings.

NITRO-GLYCERINE, ten drops of a $\frac{1}{100}$ solution, has been administered hypodermically in the complete asphyxia of drowning, with marvelous results.

CROUP.—A strip of flannel, or a napkin folded lengthwise, and dipped in hot water, and wrung out and then applied around the neck of a child that has the croup, will sometimes bring relief in ten minutes.

THE ACTION OF MASSAGE ON THE URINARY SECRETION.—Dr. Marinel (*Annales de Médecine et de Chirurgie*, Bruxelles, 1891) has made a series of experiments which tend to confirm the view of Dr. Bum, that the urine is increased by massage. This increased diuresis is not due to augmented blood pressure, but to the fact that various chemical substances are caused to enter the circulation by the action of massage.—*Oest.-ungar. Centralbl. f. d. medicin. Wissensch.*

BEER VERSUS WINE.—An investigation was recently made in Munich to ascertain the effects upon the health of excessive beer-drinking. The men and women who keep beer places in Munich, as the heaviest beer consumers in the world, were the subjects of such a medical investigation last spring. The average life-time of persons in Munich who pass the twentieth year in good health is fifty-three years. The average life-time for proprietors of beer saloons is 51.35; proprietresses of beer saloons, 51.95; brewers, 42.33. In the same city inquiry has shown that the male proprietors of wine-rooms live but forty-nine years, and women who keep wine-rooms but forty-seven.—*Med. Record.*

DIET IN ULCER OF THE STOMACH.—Dr. Roux states that we should choose foods which are digested in the intestines—milk, eggs, starches, fruits and green vegetables. Farinaceous substances and eggs should constitute the chief diet. The meal of lentils is preferable to potatoes and beans. Among green vegetables salads are excellent; green peas, turnips and carrots should be mashed before eating. Light puddings are easily digested, especially if they contain eggs.—*Jour. D'Hygiene.*

AMENORRHŒA.—The following is recommended as a reliable emmenagogue in many cases of functional amenorrhœa:

R_y Bichloride of mercury.
 Arsenite of sodium, aa. gr. iij.
 Sulphate of strychnine gr. jss.
 Carbonate of potassium.
 Sulphate of iron, aa. gr. xlv.

Mix and divide into sixty pills. Sig.: One pill after each meal.—*Revue Med. Chir. Mal. Femmes.*

FOR HAY FEVER.—*L'Union Médicale* recommends the following snuff for hay fever:

R_y Acid boric. pulv. gramme 2.0.
 Natr. salicyl. gramme 2.5.
 Cocain mur. pulv. gramme 0.12.

M. Sig.: For snuff.

For the eye symptoms a solution of sulphate of copper or sulphate of zinc, for a wash; ten drops of iodide of ethyl or three drops of nitrite of amyl may be inhaled at the onset of the attack, and the patient sent to a different climate or place.

PARSONS' LOCAL ANÆSTHETIC.—

R_y Chloroform 12 parts.
 Tinct. acōnite 12 "
 Tinct. capsicum 4 "
 Tinct. pyrethrum 2 "
 Oil cloves 2 "
 Camphor 2 "

Dissolve the camphor in the chloroform, then add oil of cloves and then the tinctures. The venerable Dr. Parsons, in sending this formula for publication, says: "I can not expect to remain much longer in this world, and I want the profession to know the value of this local anæsthetic."—*South. Dent. Journal.*

“ACTINA.”—Prof. Flavel B. Tiffany says the extensively advertised “Actina” has this composition:

R _y	Menthol crystals	℥j.
	Alcohol	℥ss.
	Ether sulph.	℥j.
	Oil mustard	℥ij.
	Sponge sufficient to make	℥j.

Or,

R _y	Menthol crystals	℥j.
	Ether hydrobromic	℥j.
	Oil mustard	℥ij.
	Sponge sufficient to make	℥j.

—*Kansas City Med. Index.*

EXALGINE IN NEURALGIA.—Dr. T. R. Fraser has found this remedy very efficacious in production of anæsthesia, especially in neuralgia. The dose varies from a six centigrammes (one grain) to a gramme (fifteen grains) in twenty-four hours. The following formula is recommended by him:

R _y	Exalgine	2.50 grammes.
	Peppermint water	5 “
	Orange syrup	30 “
	Distilled water	120 “

S.: A teaspoonful twice a day.—*La Presse Med. Belge.*

In case the peppermint taste be disagreeable to the patient, the following formula, recommended by Dujardin-Beaumetz, may be employed:

R _y	Exalgine	2.50 grammes.
	Tinct. orange peel	5 “
	Distilled water	120 “
	Syrup orange	30 “

S.: A teaspoonful morning and evening (0.25 grammes), four grains of exalgine.—*Deut. Med. Zeitung.*

IN ACUTE BRONCHITIS.—A simple expectorant mixture in acute bronchitis is:

R _y	Ammon. muriat.	℥ss.
	Mist. glycyrrhiz. comp.	℥iv.

M. Sig.: Take a desertspoonful every four hours.

The dose is smaller in the extremes of life, and in severe coughs it is given every three hours.

Tablets of the muriate of ammonium and the compound liquorice mixture are very efficient. When the secretions are with difficulty brought up, the use of senega is advised.

When the secretions are abundant and not easily coughed up, turpentine in emulsion is an excellent remedy, not so pleasant, perhaps, as terebene or terpine hydrate, but rarely failing to do good in properly selected cases. The formula, with occasional modifications to suit particular cases, is:

℞ Ol. terebinthin ʒij. to ʒiiij.
 Mucil. acaciæ q. s.
 Aq. cinnamoni ʒj.
 Aquæ, q. s. ad. ʒvj.

M. Sig.: A tablespoonful in a little water every four hours.

Ofttimes the cough is of such an irritating character that these ordinary expectorant mixtures avail little; then recourse must be made to a narcotic in some form. Codeine, a very useful alkaloid of opium, has the advantage of not constipating as much as morphine. A good combination is:

℞ Codeinæ sulphat. grs. viij.
 Syr. prun. Virginian ʒij.

M. Sig.: A teaspoonful in a little water three or four times a day, and at bedtime, if necessary.—*Ther. Gazette*, July, 1891.

GONORRŒA.—Thomas R. Neilson states that the plan of internal treatment which he has pursued for so many years past, consists, first, during the earlier stages of the disease, in the administration of an alkaline sedative mixture, with the purpose of alleviating the scalding caused by urination, the tendency to frequent micturition and to chordee. The standard formula in his dispensary practice has been:

℞ Potass. acetat. 3 drachms-½ ounce.
 Potass. bromid. 1 ½ drachms.
 Acid boric 2 drachms 2 scruples.
 Tinct. belladon. 30 minims.
 Liq. potass. citrat. 8 ounces.

M. Sig.: A teaspoonful in water every three or four hours.

Secondly, as soon as the symptoms are in a measure relieved, the administration of either oleoresin of cubebs and balsam copaiba in capsule, or cubebs alone in powder, in teaspoonful doses, or finally, where chordee is troublesome, a combination of two parts by weight of powdered cubebs and one part of bromide of potassium, given in the same doses, and from three to four times daily.—*Univ. Med. Magazine*.

INHALATIONS OF HYDROGEN DIOXIDE IN DISEASES OF THE RESPIRATORY ORGANS.—Dr. Gabrilovicz has employed inhalations of peroxide of hydrogen in cases of phthisis. The patients presented all the symptoms of the disease (infiltration at the apices, bronchial breathing, râles, loss of flesh, night-sweats, occasional hæmoptysis, etc.). A solution of peroxide of hydrogen in water, in the proportion of one to ten parts per hundred, was employed, the weak solution at the beginning. The inhalations were continued for several months. Six patients treated in this manner were greatly improved, the pulmonary symptoms being greatly ameliorated. The cough was relieved, the expectoration diminished, and in some cases the consolidation was reduced. Although the author's observations are limited, the results are certainly encouraging. Dr. Gabrilovicz thinks that inhalation of peroxide of hydrogen will prove very serviceable in the various forms of laryngitis, tracheitis, bronchitis and also in the early stages of laryngeal and pulmonary phthisis. He also advises this treatment in laryngitis stridulus, whooping-cough, asthma. In tubercular laryngitis it is best to commence with a five per cent. solution of the peroxide; in other diseases it is advisable to employ at first a one per cent. solution, gradually increasing the strength until the proper dose is reached.—*Gaz. Med. de Liège*.

THE TREATMENT OF PLEURITIC EXUDATIONS BY MASSAGE.—Dr. P. Poliakow has employed massage of the chest in ten cases of primary pleuritic exudations, seven being purely serous and three sero-fibrinous. The manipulations were made in the direction of the lymphatics of the affected region, radiating towards the axilla. The treatment was commenced by light effleurage, but soon brisk rubbing was resorted to, followed by clapottement. The sittings, which took place daily, lasted from ten to twenty minutes. Under the influence of this treatment the exudation disappeared in from eight to twenty days, while the other symptoms disappeared in from nine to thirty-five days. Massage of the thorax in cases of pleuritic exudation acts as a counter-irritant similarly to blisters and the cautery, but has the advantage that it can be practiced every day. Aside from this irritant effect, massage relieves the chest pains, invigorates the muscles, and augments the volume of the respiratory movements, an action which exerts marked influence on the absorption of the exudation and the distention of the compressed lung.—*Wiener Medizin. Presse*, No. 20, 1891.

SIMPLE REMEDY FOR PALPITATION.—Dr. Gingeot (*Rev. Gen. et de Chir. et de Ther.*) recommends as a valuable remedy for palpitation—one that has proved serviceable to him—the application of cold to the precordial region. Attention must be paid to the method of applying cold. The simplest plan of all is to apply a wet sponge over the heart in the morning before dressing. At night, when in bed, the patient or an assistant may put a cold compress over the heart, well covered with dry bandages, to retain moisture and prevent wetting of the clothing. When this compress is warm, the patient will remove it and will probably fall asleep. There are objections to the ice-bag, one being the condensation of insensible perspiration upon the surface of the skin. The ether-spray is a simple and convenient method of refrigeration. With proper instruction as to necessary precaution in the use of ether, the patient can apply cold in this way at any hour of the day or night. Palpitation of purely nervous origin seldom fails to be greatly benefited by the application of cold; and a certain success often follows its use in cases of palpitation due to organic diseases. Equalizing the heart's action will often prevent an increase in its size. It is also useful in aneurism and passive dilation.—*Jour. of the Amer. Med. Association.*

THE ACTION OF SULPHUR VAPOR BATHS.—A hot sulphur-bath, followed by rest for an hour, causes a loss of weight of one to two kilogrammes, in consequence of the profuse diaphoresis. Notwithstanding this great reduction of weight, which may be repeated for several days, it is usually found at the end of the treatment, or even before, that the patient has gained in weight. These baths stimulate the appetite and digestion, although some of this effect is, of course, attributable to the change of climate and surroundings, and to the relief from business cares afforded by a residence in a bathing resort. If the patient, instead of lying down to perspire after the bath, takes a cold douche and walks about, there is a tendency to a decrease in bodily weight. Hence, by regulating the food and manner of life of the patient during the period of bathing, it will be possible to bring about either a gain or loss of weight, and thus to influence a class of diseases dependent upon errors of nutrition, as, for example, the uric-acid diathesis, oxaluria, gout, ascites, etc. Under the influence of these baths an increased oxidation of tissues takes place, as shown by the elevation of temperature, the increased frequency of the pulse and respirations, the

profuse perspiration rich in urea, salts and fatty constituents, the increased quantity of urea in the urine, the augmented biliary secretion, the exhaustion of mind and body, but especially by the loss of weight. The increased oxidation is manifested both in the fatty and albuminous tissues, especially the latter. Owing to their marked action on tissue metabolism the sulphur-vapor baths are also useful in cases of chronic poisoning from lead, mercury or other metals, and in syphilis and other chronic infectious diseases, and for the same reason may prove efficient in cases of neoplasms, chronic hyperplasia, etc.—*Bul. Gén. de Thér.*

MASSAGE IN HEADACHE.—Dr. G. Norstrom recommends massage in certain cases of headache dependent upon a chronic myositis of the scalp, of the muscles of the back of the neck and of the sterno-mastoid and scalmi muscles. In these cases massage of the affected muscular structures may produce improvement or a cure after several weeks' treatment. The diagnosis may be made by palpation of the muscles, which are felt to be of firmer consistence than normally. In the very chronic cases the prognosis is bad, but not hopeless. Hysterical and chronic patients are more apt to be benefited by tonic constitutional than local treatment. Success from massage can only be obtained if the patient submits to a long course of treatment, the manipulations (tapottement and effleurage) being gradually and carefully increased in vigor. A cure can seldom be expected before the end of six weeks. Recurrences may take place, but disappear more rapidly than the primary disease.—*Æst.-ungar. Centralbl. f. d. med. Wissensch.*

USE OF WATER BEFORE AND AFTER MEALS.—Opinions differ as to the effect of the free ingestion of water at meal-times, but the view generally received is probably that it dilutes the gastric juice and so retards digestion. Apart from the fact that a moderate delay in the process is by no means a disadvantage, as Sir William Roberts has shown in his explanation of the popularity of tea and coffee, it is more than doubtful whether any such effect is in reality produced. When ingested during meals, water may do good by washing out the digested food and by exposing the undigested part more thoroughly to the action of the digestive ferments. Pepsin is a catalytic body, and a given quantity will work almost indefinitely, provided the peptones are removed as they are formed. The good effects of water,

drunk freely before meals, have, however, another beneficial result—it washes away the mucus which is secreted by the mucous membrane during the intervals of repose, and favors peristalsis of the whole alimentary tract. The membrane thus cleansed is in a much better condition to receive food and convert it into soluble compounds. The accumulation of mucus is specially marked in the morning, when the gastric walls are covered with a thick, tenacious layer. Food entering the stomach at this time will become covered with this tenacious coating, which for a time protects it from the action of the gastric ferments, and so retards digestion. The viscid contents, a normal condition in the morning before breakfast, are not suitable to receive food. Exercise before partaking of a meal stimulates the circulation of the blood and facilitates the flow of blood through the vessels. A glass of water washes out the mucus, partially distends the stomach, promotes peristalsis, and prepares the alimentary canal for the morning meal. Observation has shown that non-irritating liquids pass directly through the “tubular” stomach, and even if food be present, they only mix with it to a slight extent.—*Brit. Med. Journal.*

GASTRIC ULCERS CURED BY A DIET OF ICE-CREAM.—Dr. E. P. Hershey reports three cures of ulcer of the stomach from the clinic of Prof. Da Costa, in which all kinds of food, including even peptonized milk, provoked vomiting. Under the free use of ice, however, all the distressing symptoms disappeared, and after one or two months, solid nourishment was gradually added. In all of these cases a rapid gain in strength and flesh occurred. The amount of ice-cream consumed per day was never less than a quart, and sometimes amounted to two or three quarts. The author thinks it is most likely that the ice-cream in these cases acted partly by virtue of the cold, which, as a local anæsthetic, benumbs the stomach, permitting the act of digestion to go on without pain and the nourishment to be appropriated. In using ice-cream as a diet in cases of gastric ulcer, too great care can not be taken in seeing that the article is perfectly fresh and contains no corn-starch or other ingredients to thicken it. That which is over twenty-four hours old should not be used. Ice-cream may not answer in all cases, but it will be found a most excellent article of food to resort to when other foods can not be retained. It is a conceded fact that many cases of gastric

ulcer get well of themselves, provided the stomach be kept at rest. If, then, an article of diet be given which will allow of the desired rest, and at the same time nourish the patient, we have the best means of bringing about a speedy recovery. By the presence of some food in the stomach we prevent the continued corrosive action of the gastric juice upon the affected surface, a fact that certainly should be taken into consideration when the plan of rectal alimentation is entertained.

The only objection that could be taken to this form of diet is in the risk of giving impure ice-cream. There is undoubtedly danger in the hot summer months. All such risk, however, may be obviated by allowing only that to be eaten which is made at home.—*Phil. Med. News*, Aug. 8, 1891.

COCA AS A CARDIAC TONIC.—Prof. Beverly Robinson, in an article entitled "Heart Strain and Weak Heart," states:

"On several occasions, when digitalis has proved to be useless or injurious, I have had very excellent results from caffeine or convallaria. Certainly the latter drug is more easily tolerated by a sensitive stomach than digitalis is; and whenever the nervous supply of the heart is especially implicated, I believe that I secure more quieting effects from its employment. Among well-known cardiac tonics and stimulants for obtaining temporary good effects, at least, I know of no drug quite equal to coca. Given in the form of wine of fluid extract, it does much at times to restore the heart muscle to its former tone. I have obtained the best effects from the use of 'Vin Mariani.' From personal information given me by this reliable pharmacist, these results are attributable to the excellent quality of the coca leaves and of the wine which he uses in its manufacture."

Referring to "Vin Mariani," Dr. Beverly Robinson adds: "In coca also we have a powerful stimulant to the economy that frequently will strengthen or give tone to the nerves in a rapid manner, that no other drug with which I am familiar can accomplish."

"I have repeatedly felt this effect of Mariani's Wine of Coca on myself when extremely fatigued from overwork or want of sleep. The wine of Mariani is, I believe, one of the best preparations, on account of the great care exercised by its maker."

Dr. Henry Conkling, in the *Brooklyn Medical Journal*,

Vol. V., No. 3, refers to the value of coca erythroxyton as a cardiac tonic. We extract the following:

"In cardiac irritability due to the irritation from the non-elimination of urinary products, as shown by the diminution of urea, coca erythroxyton given under the form of 'Vin Mariani' has been most successfully employed. The heart here is frequently in a condition of tremor cordis, and marked muscular debility often remains after the function of the kidneys has become more normal. 'Vin Mariani' has, in our experience, proved most beneficial in restoring and saving muscular force, and thus furnishing a better organ upon which other drugs may act more favorably."

Book Notices

ON THE MEDICAL AND SURGICAL USES OF ELECTRICITY.
By George M. Beard and A. D. Rockwell, A.M.,
M.D., formerly Professor of Electro-Therapeutics in the
New York Post-Graduate Medical School and Hospital;
Fellow of the New York Academy of Medicine;
Formerly Electro-Therapeutist of the Women's Hospital
of the State of New York, etc. Eighth Edition,
with over Two Hundred Illustrations. 8vo, pp. 788.
Cloth. New York: William Wood & Co.

Dr. Beard, whose name appears on the title-page of this work, died ten years ago and has taken no part in the revisions of it since the publication of the second edition. So much change has been made in it during the ten years that have elapsed that it may be considered a new work, for which Dr. Rockwell alone is responsible. Electro-therapeutics has not been on a standstill, but has made great advances since attention has been given to it, and continues to make advances.

We have noticed some of the previous editions of this work, and the scope of it has been described by us. But the changes and additions in this eighth edition have been more extensive, and more time and toil expended in its thorough revision than in any other edition since the second. The work, as it now stands, represents Dr. Rockwell's accumulated and thoroughly sifted experience from his entrance upon the specialty of electro-therapeutics.

Aside from that considerable portion original with and

familiar to this work, it comprehends, it is believed, all else of real value pertaining to the subject. As stated in the preface, the chapters upon Diseases of Women, Electrical Apparatus, and Static Electricity have been largely recast, additions made to the chapter on Electro-Diagnosis, and many new and improved illustrations, representing practical and important methods of application, supply the places of the old ones.

The author draws attention to the fact, which we consider of importance, that there are persons who must be treated not only mildly, but at long intervals, and there are persons, with perhaps the same maladies, that can bear with advantage powerful and frequent applications; to distinguish between the extremes of tolerance and of susceptibility, he states, is the first duty, and oftentimes the hardest study of him who makes use of electricity in medicine.

The Leclanche battery is highly spoken of in the work, being pronounced more constant than any other battery yet invented. It was devised by Leclanche, a Frenchman, in 1868. It has the great advantage that if not overworked it will last for months or years, and yet retain sufficient power to be quite useful in electro-therapeutics. This is not true of any other battery; even Daniell's, the most constant of all, requires replenishing or cleaning every few months, else it becomes worthless.

In the division of Electro-Therapeutics, Chapter II., Dr. Rockwell calls attention to the fact that up to the year 1866 it was held, by nearly all writers on the subject, that the stimulation was the main, if not the only, action of electricity. The idea that it was a tonic was not discussed. Consequently, the few who employed electricity at all supposed that when they had used it to "kick up" palsied muscles, they had exhausted its therapeutic action. It was considered by all as contra-indicated in febrile and inflammatory infections. The acceptance of the view that it is a tonic, which was first promulgated by Dr. Rockwell in an article in the *Med. Record* in 1866, wrought a revolution in electro-therapeutics. "An agent which was formerly used mainly, if not exclusively, in paralysis and rheumatism, is now used, and with far more brilliant success, in hysteria and affections allied to it, in insanity, anemia, neurasthenia, in nervous dyspepsia, neuralgia, chorea, in the convalescence from fevers, and all forms of pain and debility whatsoever."

The work is divided into Electro-Physics, containing six chapters; Electro-Physiology, eleven chapters; Electro-Therapeutics, thirty-nine chapters; and Electro-Surgery, eight chapters. Among the diseases that are recommended to be treated by the different forms of electricity are hysteria and allied affections; insanity; cerebral and spinal congestion; neuralgia; anestheia; paralysis; locomotor ataxia; progressive muscular atrophy; rheumatism and gout; diseases of the skin, as eczema, acne, psoriasis, etc.; diseases of the organs of digestion, as dyspepsia, jaundice, constipation, chronic diarrhea, etc.; diseases of women, as dysmenorrhea, leucorrhea, menorrhagia, displacement of the uterus, etc.; diseases of children, as incontinence of urine, etc.; diseases of the eye; diseases of the ear; diseases of the heart and lungs, as palpitation of the heart, angina pectoris, etc.; sequelæ of acute diseases, etc.

Among the surgical diseases recommended to be treated by electricity are strictures, various tumors, goitres, epithelioma, syronitis, hydrocele, carbuncles, burns, pseudoarthrosis, etc.

The work of Drs. Beard and Rockwell really needs no commendation. The fact that it has reached its eighth edition—the last six in less than ten years—shows that it is held in very high estimation by the medical profession. It is an exhaustive work, and contains in full the results of all investigations upon the subject of electricity as a therapeutic agent.

ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES. A Yearly Report of the Progress of the General Sanitary Sciences Throughout the World. Edited by Charles E. Sajous, M.D., and Seventy Associate Editors, assisted by over two hundred Corresponding Editors, Collaborators and Correspondents. Illustrated with Chromo-Lithographs, Engravings and Maps. For the Year 1891. Five Volumes, each volume containing over five hundred pages. 8vo, cloth. Philadelphia: F. A. Davis, 1231 Filbert street.

The five volumes for 1891, constituting the fourth series of the ANNUAL, is now on our table. They form a treasury of knowledge of such value as to cause one to feel who has them that he has come in possession of a gold mine. That this statement is not an exaggeration we are sure will be ad-

mitted when it is called to mind that the work contains the cream of all the medical literature published throughout the world for a year previous to the date of its issue, as culled from books, medical journals, monographs, papers read before societies, etc., by Dr. Sajous, assisted by *seventy associate editors, and over two hundred collaborators*. In the first volume, 995 medical journals are quoted from, or reference made to them. In the list are not only the names of nearly every medical periodical in this country and Great Britain, from which quotations have been taken, but also those of France, Germany, Austria, Spain, Sweden, Italy, Russia, Turkey, Hindostan, Australia, Japan, etc. For the edification of our readers we give the titles of a few: Gyogyszereszi hetilap, Budapest; Medicina cientifica basada en la fisiologia y en la experimentacion clinica, Mexico; Laitopisj chirurgitschestwa, Moscow; Revista dos cursos practicos et theoreticos da Faculdade de medicini do, Rio de Janeiro; Eira, Stockholm.

Among the associate editors we find the names of Dr. James T. Whittaker, of Cincinnati; Dr. Solis-Cohen, of Philadelphia; Dr. Paul F. Munde, of New York; Dr. Geo. H. Rohe, of Baltimore, and many others equally eminent. The corresponding staff is composed of distinguished medical gentlemen of all parts of the civilized world.

We will here give an interesting quotation from the first volume, under the head of Diseases of Digestive Organs of Children: "One of the most important papers of the year, upon the chemistry and bacteriology of summer diarrhoea, was that of Victor C. Vaughan. Taking the cultures of three germs from a series of fifteen isolated from diarrhoea patients by Booker, of Baltimore, he submitted them to most careful chemical manipulation. From each he obtained a highly poisonous proteid. Injected under the skin of kittens or dogs, it caused vomiting and purging, and, when employed in sufficient quantities, collapse and death. Post-mortem examination showed the intestines pale throughout and the heart in diastole. Conclusions from these experiments were as follows: 1. There are many germs, any one of which, when introduced into the intestines of the infant under certain favorable circumstances, may produce diarrhoea. 2. Many of these germs are probably saprophytic. A germ growing in the intestines does not necessarily feed upon living matter. If it will grow in a certain medium in a flask, and produce a poison, it will

also grow in the intestines and produce the same poison, provided it is not destroyed by some secretion of the body.

3. The only digestive secretion which is known to have any decided germicidal effect is the gastric juice; therefore, if the secretion be impaired, there is, at least, the possibility that the living will pass on to the intestines, will there multiply, and will, if it be capable of doing so, elaborate a poison which may be observed. The chief reason why a breast-fed child does better than one fed upon cow's milk is because its food is free from germs; but a second reason is found in the larger amount of acid required to neutralize cows' milk.

4. Any germ which is capable of growing and producing an observable poison in the intestines is a pathogenic germ. It is not necessary that it should be capable of growing and causing death or disease when injected under the skin, to establish its rank with the pathogenic germs.

5. The proper classification of germs in regard to their relation to disease can not be made from their morphology alone, but must depend largely upon the products of their growth. Thus the three bacilli, while not closely related morphologically, were physiologically near akin."

In the October issue of one of the great monthlies published in this country (we believe it is the *North American Review*), a writer gives an account of his cure of dipsomania by the administration of a salt of gold, while sojourning in an inebriate asylum in Illinois. In the fifth volume of the series of the ANNUAL before us is a description of the action of gold upon the brain. We quote as follows:

"1. Bromide of gold undoubtedly inhibits the cortical motor centers, even when administered in smaller doses than other bromides. After an internal administration of bromide of gold in the dose of 0.1 or 0.2 gramme ($1\frac{1}{2}$ or $3\frac{1}{10}$ grains) to the kilogramme of the animal's weight, even the strongest and very prolonged electric stimulation of the cortex fails to bring about any epileptic seizures. To obtain the same effects from bromide of potassium the latter should be introduced in the dose of 0.6 or 0.7 gramme ($9\frac{1}{4}$ or $10\frac{3}{4}$ grains) to each kilogramme, while bromide of sodium should be given in still larger quantities.

2. The most marked effects are observed when the drug is injected into a vein, when even 0.005 gramme ($\frac{2}{25}$ grain) to one kilogramme totally inhibits the fits.

3. Irritability of individual motor centers, as determined by the appearance of contractions in corresponding muscular groups, is depressed by bromide of gold in a

but trifling degree. 4. Excitability of the white substance of the motor region remains intact. 5. The drug seems to affect mainly the tracts of communication between individual motor centers as well as between remote areas of the cerebral cortex. 6. It does not appear to possess any particular cumulative action. 7. Of accessory effects there are observed only vomiting (very rarely, and that solely on an internal use) and some depression of sensation which occurs only on the use of larger doses, such as 0.15 gramme ($2\frac{1}{3}$ grains) to each kilogramme. (Even a prolonged administration never gives rise to unsteady gait, general depression or languor, or emaciation, all of which symptoms are observed in the case of bromide of potassium.) 8. The physiological effects of bromide of gold and their difference from those of the other bromides, can not possibly be attributed to the proportion of bromide present therein, since the strongest of the three, bromide of gold, contains the smallest amount of bromide (fifty-five per cent. by weight), while the weakest of them, bromide of sodium, shows the richest proportion of the element (77.7 per cent.), the potassic salt standing midway with 67.2 per cent. of bromine."

The two lengthy quotations we have given above, besides the valuable information contained in them, will give the reader a tolerable idea of the use made in the work of the very many medical journals published throughout the civilized world, and of papers read before medical societies, and of all other medical publications.

Editorial.

LOCALIZATION IN THE ENCEPHALON. — We quote the following from an editorial in the *Journal of Psychology*, edited by C. L. Herrick, Professor of Biology in the University of Cincinnati:

"Both schools of experimenters are partly right and partly wrong. Localization is not possible in the arbitrary way attempted by Munk, neither can it be denied so abruptly as by Goltz. There are areas corresponding to the several classes of sensations, but these cortical areas overlap to a very great extent, so that injury to any part of the cortex may induce disturbances of a large number of functions. There is an inner nucleus, or sphere, for each sense, however, and these are located much as indicated by Munk.

"Extensive cortical lesions produce changes in disposition, because of the loss of the normal association of percepts and images in the soul. Of the two views, first, that the cortex contains centers for all mental manifestations, even to the crudest sensations and motor impulses; and, second, that the cortex is solely concerned with concepts derived from the several senses and voluntary impulses as well as memory and attention, the authors seem to lean to the latter. The corpus striatum is regarded as an integral part of the cortex as much as the hippocampus.

"The attempt of Munk to substantiate a topographical projection of the retinal areas upon the cortex is considered as contrary to the facts brought out, and summarily dismissed. On the other hand, it is concluded that the cortex contains only centers of sense-perception with their correlated memory-images, while simple sensation and motor impulses are located in the lower centers."

THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION will hold its next session in Richmond, Va., November 10, 11 and 12. Louis S. McMurtry, M.D., of Louisville, Ky., is President, and W. E. B. Davis, M.D., of Birmingham, Ala., is Secretary. The titles of about thirty papers are on the preliminary programme to be read. Members of the medical profession everywhere are cordially invited to be present and take part in the proceedings. They will be treated after the old-fashioned style of Southern hospitality.

DECEASE OF MRS. JULIET M. THORPE.—This lady, a practicing physician of Cincinnati, died October 4, at Xenia, O., at the residence of her parents. We had a notice prepared of her decease, but as it seemed to have gotten mislaid just as we were ready to close this number of the NEWS, we clip the following from the *Lancet-Clinic*:

"Dr. Thorpe was an active member both of the Academy of Medicine and the Cincinnati Medical Society, seldom being absent from their meetings, and frequently contributing to the programme of both. Her last contribution was a paper on 'Summer Diarrhoea of Children,' read before the Cincinnati Medical Society, May 19, 1891.

"Dr. Thorpe was born in Xenia, O. After graduating from the high school of her native town she went to Vassar

College. From Vassar she went to New York, and graduated from the New York College of Medicine. Shortly after graduating in medicine she married, and for a time lived in Covington, but of late years Cincinnati proper has been her home.

"She had been in the practice of her profession in this city for a few years past, and created a most favorable impression. Her life was pure and her professional aspirations high. Had she been spared, she would undoubtedly soon have taken a prominent position among the physicians of her sex in this city."

At a recent meeting of the Academy of Medicine, the following resolutions were presented by the committee which had been appointed for the purpose of drawing them up, and passed:

"WHEREAS, death has removed from our midst one of our esteemed members, Dr. Juliet Monroe Thorpe; therefore.

"*Resolved*, That in her death the community has lost an esteemed citizen; the profession a brilliant and energetic member, and this society a respected and valued associate; and that we deeply sympathize with her family and friends in their sad bereavement.

"T. V. FITZPATRICK,
"MARY E. OSBORNE,
"JULIA W. CARPENTER,
"Committee."

BRYANT'S ADVICE.—Some persons, to affect knowledge, fill whatever articles they write with foreign expressions. We have met with articles in journals and newspapers so full of expressions in French, German or Italian, that we could with difficulty determine the views of the writer upon the subject he was writing, in consequence of the multitude of expressions in one or the other of these languages. Not a few young physicians indulge in this method of writing.

Bryant once wrote to a young friend as follows: "I observe that you have used several French expressions in your letter. I think if you will study the English language that you will find it capable of expressing all the ideas you may have. I have always found it so, and in all that I have written I do not recall an instance where I was tempted to use a foreign word but that on searching I have found a better one in my own language. Be simple, unaffected;

be honest in your speaking and writing. Never use a long word where a short one will do as well. Call a spade by its name, and not a well-known instrument of manual labor; let a home be a home, and not a residence; a place, not a locality, etc."

We will take the opportunity to advise young physicians, when writing for publication, not to repeat sentence after sentence having the same meaning, though expressed in different words. We have often met with such MSS.

ATHEROMA PRODUCED BY AN EXCLUSIVELY VEGETABLE DIET.—Dr. Alanus, says the *Med. & Surg. Rep.*, publishes in the *Rhenish Courier*, that, having been a vegetarian for a long time, he made the disagreeable discovery that his arteries were beginning to show signs of atheromatous degeneration, particularly in the temporal and radial arteries, though he was under forty. Searching for the cause of this remarkable phenomenon, he came across a work by Dr. E. Monin, of Paris, containing a quotation from an article by the late Dr. Gubler on the influence of a vegetable diet on the chalky degeneration of the arteries, in which it was stated that vegetable food, richer in mineral salts than that of animal origin, introduces more mineral salts into the blood. Raymond, it is stated, has observed numerous cases of atheroma in a monastery of vegetarian friars; amongst others that of the prior, a man scarcely thirty-two years old, whose arteries were already considerably indurated. The naval surgeon, Treille, has seen numerous cases of atheromatous degeneration in Bombay and Calcutta, where many people live exclusively on rice. A vegetable diet, therefore, ruins the blood-vessels, and makes prematurely old, if it is true that man is as old as his arteries. It must produce at the same time tartar, the senile arch of the cornea, and phosphaturia.

UNION MEETING OF THE DISTRICT MEDICAL SOCIETIES OF NORTHERN OHIO.—It has been decided by the joint committee appointed by these societies, to hold a union meeting of the Northwestern, the Northeastern and the North-Central Medical Societies, at Mansfield, O., on Thursday, Friday and Saturday, November 5, 6 and 7.

On Thursday evening the members will be entertained by a reception given in honor of the association by the Hon. John Sherman, and on Friday evening by a reception given by the Hon. M. D. Harter. Every arrangement has

been made to make this meeting a pleasant and profitable one, and we trust that a full attendance may be had.

Ample hotel accommodations will be arranged for, and an effort will be made to secure reduced rates on all the railroads of Ohio.

The following Committee of Arrangements have been appointed: Dr. R. Harvey Reed, Dr. J. W. Craig and Dr. George Mitchell, all of Mansfield.

JAMES A. DUNCAN, M.D.,

X. C. SCOTT, M.D.,

R. HARVEY REED, M.D.,

Joint Committee.

MITCHELL DISTRICT (Ind.) MEDICAL SOCIETY.—The semi-annual meeting of this society will be held at Columbus, Ind., on Thursday and Friday, December 17 and 18, 1891.

This promises to be one of the best meetings yet held by this society. Columbus has been noted for good meetings in the past, but the resident physicians declare that this "shall be the boss." Reduced rates on all railroads entering Columbus will be obtained, if possible. Our hotels are large and well equipped, and the doctor attending this meeting may promise himself a good time.

Physicians desiring to read papers at this meeting will please forward the title of their papers to the Committee of Arrangements as soon as possible.

GEO. F. MCCOY, M.D.,

Chairman of Committee of Arrangements.

HOW THEY KILL HAWKS IN CALIFORNIA.—In the September issue of the *California Druggist* a unique method, "which is strange if true"—and it is told as true—is related how the farmers, in some portions of California, kill those birds of prey, hawks, which carry off their chickens to devour them. It is stated that the farmers in the mountainous portions of the State find it almost impossible to successfully raise poultry in consequence of the depredations of these birds. When the fowls have reached the toothsome age of "spring chickens," the most watchful vigilance of the poor farmers is unavailing to preserve them for their own use and for marketing. Finding that vigilance would not answer the purpose to keep their hen-roosts stocked with chickens, so that they could hospitably entertain their clerical friends when they would call upon them, the farmers

adopted the following plan: A quantity of "nux vomica buttons" are powdered about as fine as ordinary corn meal. A considerable amount of this unpalatable meal is added to the chickens' food, and as the chicken is a bird which digests its food mechanically by means of gravel, sand, etc., it is not affected at all by the strychnine, which is practically insoluble in water (solubility being about 1.36000), and does not act locally, but only by absorption, and consequently it follows that large quantities can be given the chickens with impunity, and still not interfere with their use as an article of food for man, as the strychnine remains undissolved in the entrails. But when a hawk captures one of these fowls and devours it, his stolen meal, in due course of time, causes him to feel indisposed, and it will not be long until there is a dead hawk. The hawk is a carnivorous bird; hence its digestion is a chemical one instead of mechanical; and as the entrails are to him the daintiest portion, he gets into his stomach the greater part of the undissolved drug, which is acted upon by digestive fluids present in the stomach, forming soluble compounds, which, being absorbed, result, fatally.

The theory propounded, explaining how nux vomica will promptly kill one bird and not injure another in consequence of each one digesting its food in a different manner, seems very plausible and may be true, but until we had tested the correctness of the theory by experiment with a limited number of subjects, we would decline, if extensively engaged in raising chickens, to feed a few thousand of them upon powdered nux vomica buttons for the purpose of killing off a great number of thieving hawks. There is no doubt but that science has developed a great many useful discoveries by which human labor has been greatly lessened, but it sometimes happens, as with Koch's lymph, that investigators have been mistaken in the results of their researches.

ENGLISH SANITARY SUBJECTS.—August and September were great months for congresses of all kinds in Europe. The columns of the London *Times*, we understand, have been filled with reports of these gatherings. Though, probably, but very few people read all of these articles—may be not one in a hundred—yet the pages of the paper were more edifying to the subscribers, certainly less injurious to the public morals, than are those of many papers published in this.

country which are largely filled with details of murders, thefts, rapes, prize-fights, knock-downs, stabbings, defamations of good men's names, etc. No gathering, from what we can learn, attracted more attention in England than the Hygienic Congress, at which the Prince of Wales presided. The Prince, it is stated, summed up the gist of all sanitary teaching as follows: "We read of preventable diseases. If preventable, why are they not prevented?"

This is a queer question for an intelligent man to propound. If the Prince would see what comes before his eyes every day, and would devote a little time to reflection, he would not have given utterance to such expressions. Has not small-pox been prevented to an extent that millions of lives have been saved since the discovery of vaccination? And why has not the disease been prevented to the extent of being stamped out? Are physicians to be blamed, or the people and legislatures? Surely not the former. But besides discovering a means for preventing small-pox, which used to prevail as a terrible, dreaded plague, decimating at intervals communities and cities, medical men by their researches and discoveries in sanitary science, and by enlightening the people in methods to preserve their health and to escape the causes of disease, have diminished the death-rate in a wonderful manner; and this, too, notwithstanding the fact that the manners and customs of society, by making the mode of living more artificial and less natural, and the great increase of wealth in the case of some and the great increase of poverty in the case of many more; together with the greater struggle needed for existence, have tended to multiply diseases and shorten the span of human life, and would have thus resulted if not counteracted by the advances made by physicians in medical science.

There exists in the world a class of men who feel that they themselves are of but little account in the world, and that they have too little talent to become eminent in any useful intellectual employment. Wishing, however, to bring themselves into notice in some way, they seek notoriety by slandering and maligning those who have gained the approbation of their fellow-men by the good they have done. One of these fellows, who, if at any time, he was attacked by some griping pains of his intestines, would send in great haste for a doctor and beseech him to save his life, replies to the queries of the Prince of Wales as follows: "The answer is only too obvious. It is possible even to buy health

too dear, and even if we could afford to pay for it in cash, we could not afford to sacrifice the liberty in order to save a few from the inconvenience of ill-health. As long as men are willing to die frightful deaths by the thousand on the battlefield to rid themselves from authority that is irksome, it is idle to propose that, merely for the chance of reducing their liability to disease, they should become the bond-slaves of the doctors, who, in almost every age, have committed themselves to blunders which have made them the laughing-stock of their own profession in the next generation."

The writer of the above reply to the question of the son of the Empress of India, need not wait a generation to be the "laughing-stock" of his fellow-fools. If he will check his stream of idiocy for a moment and give attention, he will find that his brothers are now chuckling with one another and making him the butt of their jests.

Says a writer: "The doctors have undoubtedly a splendid record of sanitation to show as the result of improved sanitation." The death-rate of England, which was 80 per 1,000 in 1660-1679, fell to 42 per 1,000 in 1681-1690, and to 35 per 1,000 in 1746-1755. Since then the progress toward health has been slower. In 1846-1855 it was nearly 25. In 1889 it had fallen to just below 18. "Preventable diseases," it is stated, "according to Sir Joseph Fayrer, still kill 125,000 Englishmen every year." Well, is it probable that with all the terrible dissipation that exists in England, together with the abject poverty of tens of thousands, added to which is fearful ignorance of all laws of health of innumerable numbers of the inhabitants, that the so-called "*preventable diseases*" can be altogether eliminated from the kingdom and cease to act as causes of death? We consider it hardly reasonable, and therefore the loss of £7,750,000 per annum will have to be endured until the Parliament of that country can be brought to the point of enacting such laws as will reduce the frightful drunkenness of the rich and poor, especially of the latter, and enable the laboring classes to be better fed and more comfortably clad.

A member of the Hygienic Congress to which we alluded drew a contrast between the England of Queen Elizabeth's period and that of the England in the time of Queen Victoria. The four millions of Englishmen who called Elizabeth queen were subject to black death, sweating sickness, plague, petechial typhus, eruptive fevers, lep-

rosy, scurvy, malarial fever, dysentery, etc. The country was uncultivated and covered with marshes and stagnant water. "All this is true," the speaker said, "but still the four millions who suffered these miseries produced Shakespeare and Bacon, a considerably greater achievement than the twenty-nine millions have accomplished in producing Tennyson and Herbert Spencer." But why compare Bacon with Herbert Spencer and Shakespeare with Tennyson? The advance in medical science did not have anything to do with making Tennyson inferior to Shakespeare. We have seen the statement often that a country is never able to produce but one very brilliant man in any one department of literature.

Miscellany.

JUDGING from Armour & Co.'s extensive advertising and sampling, it would appear as though they don't care how many physicians know that they prepare a line of elegant digestive ferments. Everybody already knows, we might say, that Armour & Co. produce their own raw materials, hence the usual deterioration during transportation is avoided, with the obviously important consequences of entire absence of toxic principles in their products, and their unusually high tests. Armour & Co. state that they have every advantage necessary to their being headquarters in the line of digestive ferments, as they are already in Extract of Beef, not only in quality, but in price. For further information we refer our readers to advertisement.

ANTI-KAMNIA.—Dr. Caleb Lyon, of Staten Island, writes that he has used eight ounces of antikamnia in his practice. His experience prompts him to assert that he would rather abandon morphine than antikamnia, which he also considers an unequaled febrifuge. Patients, he says, never object to taking the dry powder on the tongue, nor has one ever complained of feeling the slightest malaise after its administration. Dr. Lyon has had twenty-five years of hospital and private practice.

SAMPLES of Sander & Sons' Eucalypti Extract (Eucalyptol), gratis, through Dr. Sander, Dillon, Iowa. Eucalyptol stands foremost as a disinfectant, is a perfect check to inflammatory action, and invaluable in zymotic diseases. Meyer Bros. Drug Co., St. Louis, Mo., sole agents.

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Original Contributions.

Cannabis Indica as an Anodyne and Hypnotic.

BY J. B. MATTISON, M.D.,

Medical Director Brooklyn Home for Habitues; Member American Medical Association, American Association for the Cure of Inebriety, New York Academy of Medicine, New York Medico-Legal Society, New York Neurological Society, Medical Society of the County of Kings.

Read before the Medical Society of the County of Kings, September 15, 1891. Contributed to the CINCINNATI MEDICAL NEWS.

Indian hemp is not a poison. This statement is made, just here, because the writer thinks a fear of its toxic power is one reason why this drug is not more largely used. This mistaken idea lessens its value, because it is not pushed to the point of securing a full therapeutic effect. This is a fact. One of the best pharmacologists in this country not long since expressed a very touching solicitude lest the writer's advocating robust doses of this valued drug might cause a decrease in the census that would seriously imperil his professional good repute.

There is not on record any well-attested case of death from cannabis indica. Potter says: "Death has never been produced." Hare asserts: "No case of death from its use in man is on record." Bartholow affirms: "Cases of acute poisoning have never been reported." Stillé states: "We are not acquainted with any instance of death." Wood declares: "Hemp is not a dangerous drug; even the largest doses do not compromise life. No acute fatal poisoning has been reported." A prolonged personal experience, compassing the history of many cases—men and women—and hundreds of doses, ranging from thirty to sixty minims of the fluid extract, has never brought any anxiety along toxic lines.

Having thus brushed aside this bugbear, we may note, *en passant*, the statement, on high authority—Potter—that

"cannabis was formerly employed as an anodyne and hypnotic. It is now somewhat out of fashion." Why this early repute has not been continued is due to a cause cited, coupled with non-reliable products, and, doubtless, the coming of other analgesic-soporifics.

The first cause need not longer obtain; the second can be removed by careful choosing and trial; while the last should not preclude the use of a drug that has a special value in some morbid conditions, and the intrinsic merit and superior safety of which entitle it to the place it once held in therapeutics. Digitalis, for a time, was in disuse. So, too, codeine, which my experience has proved a valued anodyne—one worthy a wider use than it has had, and which I think it will surely get—and impelled me to present the American Medical Association, at its last meeting, with a paper thereon, that I trust you have done me the honor to read.

There is a consensus of opinion among writers on therapeutics as to the anti-agrypnic, analgesic and anæsthetic power of Indian hemp. For the latter it was used prior to ether. Wood, testing it in himself, asserted "marked anæsthesia of the skin all day." Stillé says: "Its anæsthetic virtue is shown in allaying the intense itching of eczema, so as to permit sleep." And that a similar seemingly trivial disorder may have a serious outcome is proven by the fact that a well-marked case of triple addiction, under my care last year—a medical man who took daily fifteen grains morphine with thirty-five grains cocaine, subcutaneously, and fourteen ounces of rum—had its rise in a morphia hypodermic taken to relieve urticaria.

Stillé says: "Its curative powers are unquestionable in spasmodic and painful affections." Noting the latter in detail, its most important use is in that opprobrium of the healing art—migraine. In a paper by the writer, eight years ago, "Opium Addiction among Medical Men"—*Medical Record*, June 9, 1883—in reviewing the causes, this was asserted the most frequent. Enlarged experience has not changed that opinion. A case from such cause, woman, ten years morphia taking, thirty grains, by mouth, daily, is now under my care. A sister, so situated, from the same cause, awaits similar service; and their mother took morphia for headache till death ended her need.

Ringer says: "No single drug have I found so useful in migraine." He thinks it acts well in all forms, but seems most useful in preventing rather than arresting. He deems

it specially effective in attacks due to fatigue, anxiety, or climacteric change. Dr. E. C. Seguin, in 1877, commended it highly.

Dr. Wharton Sinkler, in a paper on migraine, gives first place to cannabis, and thinks it of more value in this form of headache than any other. Richard Green, who first commended it in this complaint, thinks it not only relieves, but cures; in nearly all cases giving lasting relief.

In the *British Medical Journal*, July 4, 1891, Dr. Suckling, Professor of Medicine, Queen's College, Birmingham, writes: "I have during the last few years been accustomed to prescribe Indian hemp in many conditions, and this drug seems to me to deserve a better repute than it has obtained." He calls it "almost a specific" in a form of insanity peculiar to women, caused by mental worry or moral shock, in which it clearly acts as a psychic anodyne—"seems to remove the mental distress and unrest." After commending it in melancholia and mania, he says: "In migraine the drug is of great value; a pill containing one-half grain of the extract, with or without a one-quarter grain of phosphate of zinc, will often immediately check an attack, and if the pill be given twice a day continuously, the severity and frequency of the attacks are often diminished. I have met with patients who have been incapacitated for work from the frequency of the attacks, and who have been enabled by the use of Indian hemp to resume their employment." In a personal note from the doctor he wrote: "I have used Indian hemp as an anodyne and hypnotic, and find it most useful in both ways. I have never seen any ill results."

Anstie commends it in migraine and the pains of chronic chloral and alcohol taking. In his work on neuralgia—the best ever written, and one which I advise every one to read, if not read—he says: "From one-quarter to one-half grain of *good extract* of cannabis, repeated in two hours, if it has not produced sleep, is an excellent remedy in migraine of the young. It is very important in this disease that *the habit of long neuralgic paroxysms should not be set up.*"

Russell Reynolds thinks that in neuralgia, migraine and neuritis, even of long standing, it is by far the best of drugs. Mackenzie has used it with much success in constant all-day headache, not dependent on anæmia or peripheral irritation. Bastian and Reynolds commend it in the delirium of cerebral softening, and the latter says it calms the head pain and unrest of epileptics. In cardiac tumult, in senile insomnia

and delirium, and the night unrest of general paresis, it acts well.

In some diseases common to women hemp works well. Grailly Hewitt says that in many cases of uterine cancer it allays or prevents pain. Ringer asserts it sometimes signally useful in dysmenorrhœa. West commends it here. Potter states that its anodyne power is marked in chronic metritis and dysmenorrhœa; and Hare thinks it of great value in chronic uterine irritation and nervous and spasmodic dysmenorrhœa. Donavan and Fuller claim it of value in migraine and chronic rheumatism, and Mackenzie in hay fever and hay asthma.

In genito-urinary disorder it often acts kindly—the renal pain of Bright's disease; in vesical spasm; retention of urine, and chordee; and it calms the pain of clap equal to sandal or copaiva, and is less unpleasant. The distress of gastric ulcer and gastrodynia are eased by it, and in other and varied neuralgias it serves one well. In some cases of advanced phthisis and other cureless disease it will bring euthanasia by allaying pain and unrest.

My experience with hemp covers more than a decade, many cases, and several pounds of fluid extract. It is proper to state that these cases have been solely habitués or ex-habitués of opium, chloral or cocaine. In these, often, it has proved an efficient substitute for the poppy. Its power in this regard has sometimes surprised me. Both sexes took it, and with some no other drug anodyne was used. One of these—a naval surgeon, nine years a ten-grains daily subcutaneous morphia taker—recovered with less than a dozen doses. My oldest female patient—sixty-four—found its service complete. Its action has varied, as some cases respond more fully. This during the early abstinence time. Later, it has done good in the post-poppy neuralgiæ, especially the cranial kind, and it has calmed mental pain and unrest.

As a hypnotic, Frommuller gave hemp in one thousand cases. Success, 530; partial success, 215; no success, 253. As such in delirium tremens, Potter declares it "the best." Anstie thought it better than opium when the pulse is feeble. Phillips asserts it "one of the most useful." Tyrrell and Beddoe say the same. Suckling's opinion has been given. McConnell commends it in the insomnia of chronic cardiac and renal disease. Oxley lauds it in the insomnia of severe

chorea, especially in children; the tincture "more effectual than any other hypnotic."

My own results prove it a satisfactory soporific, even oftener than as an anodyne. And this, too, under conditions that test thoroughly the power of any drug in this regard, for the insomnia of ex-poppy habitués finds its equal only in the agrypnia of the insane. With many, no other hypnotic was used. The sleep has been sound and refreshing. Many cases showed a notable influence to it as regards time—somewhat akin to sulfonal. Two hours sufficed. The first, pleasant stimulation; the second, increasing drowsiness, ending in sleep.

Again, I admit my special cases may involve a condition making them more easily subject to hemp hypnosis, but these do not preclude the wisdom of its trial with other patients in whom it may act equally well.

Writers on cannabis refer to certain peculiar effects—which, in our thinking, are more often peculiar to the patient—that may here be noted. One is a mild intoxication. I say "mild," because the hashish, assassin-like, running-a-muck form is less fact than fancy. It is said temperament largely determines the mental effect, whether it be grave or gay, merry or mad. Most of my cases—when such—have been in a merry mood. Of the hundreds of times given, only once did it excite to violence. That was a young physician, six years ago, in which it came close to a personal assault on the writer that was warded off only by superior strength. The patient afterward avowed no knowledge of such a situation, was profuse in apology, and stated that once, after taking hemp simply to note results, he routed every one out of the house, including his own grandmother!

Catalepsy is a rare sequence. We have seen it once. A woman, twenty-three, brunette, small but active, took, in early evening, forty minims Squibb's fluid extract as a soporific. After playing cards half an hour, she began to be very jolly, and it was suggested she retire. Visiting her later, she was found completely cataleptic. It soon subsided, sleep followed, and no after ill effect.

Failure with hemp is largely due to inferior preparations, and this has had much to do with its limited use. It should never be called inert till full trial with an active product proves it.

Wood thinks the English extracts best. I have used, mainly, Squibb's fluid extract. To a small extent, Parke,

Davis & Co.'s Normal Liquid. They are reliable. Hare commends the solid extract made by the latter, and by McKesson & Robbins.

Merck has produced two elegant and efficient extracts—cannabine tannate and cannabinone. They are essentially hypnotic. I show you specimens. The former has been found by Prior, Vogelsgesang, Mendel and others, a satisfactory soporific. Prior gave it one hundred times to thirty-five persons—the most with success. In hysteric cases not calmed by chloral or opium, it acts specially well. In the small dose of one grain it has brought sleep when one-third grain morphia failed.

Another cause of failure is too timid giving. I am convinced that the dose of books is, often, too small. The only true way is, once a good extract, push it to full effect. My doses have been large—forty to sixty minims of the fluid extract—overlarge for the non-narcotic habitu ; but, as we years ago asserted, habitual poppy taking begets a peculiar tolerance of other nervines, and they must be more robustly given. Both sexes have taken them—women frequently—with no other effect than quiet and sleep. I think, for many, small doses are stimulant and exciting; large ones, sedative and quieting. They are the outcome of an experience with smaller doses that failed of effect desired. They prove hemp harmless, and they add proof to the opinion of most neurologists that, once a nervine needed, it is often better to give one full dose than several small.

The tincture—three grains to the drachm—may be given in doses of twenty to sixty minims. The fluid extract, five to twenty minims. The solid extract, one-half to two grains. Tannate of cannabin, five to fifteen grains. Cannabinone, one-half to one and a half grains. Cannabinone with milk sugar, five to fifteen grains, and each repeated or increased till a full effect is secured. It is said that in women cannabinone acts twice as strongly as in men. In headache, periodical or long continued, one-half to two grains solid extract may be given each hour or two till the attack is arrested, and then continued in a similar dose, morning and night, for weeks or months. It is important not to quit the drug during a respite from pain.

I close this paper by again asking attention to the need of giving hemp in migraine. Were its use limited to this alone, its worth, direct and indirect, would be greater than most imagine. Bear in mind the bane of American women

is headache. Recollect that hemp eases pain without disturbing stomach and secretions so often as opium, and that competent men think it not only calmative, but curative. Above all, remember the close genetic relation, of migraine relieved by opium, to a disease that spares neither sex, state nor condition.

Dr. Suckling wrote me: "The young men rarely prescribe it." To them I specially commend it. With a wish for speedy effect, it is so easy to use that modern mischief-maker, hypodermic morphia, that they are prone to forget remote results of incautious opiate giving.

Would that the wisdom which has come to their professional fathers through, it may be, a hapless experience, might serve them to steer clear of narcotic shoals on which many a patient has gone awreck.

Indian hemp is not here lauded as a specific. It will, at times, fail. So do other drugs. But the many cases in which it acts well, entitle it to a large and lasting confidence.

My experience warrants this statement: *Cannabis indica* is, often, a safe and successful anodyne and hypnotic.

Report of a Case of Blood-Poisoning.

BY F. A. SCHMITT, M.D., SCHULENBURG.

"It may be considered as incidental to, and but a tribute we owe our calling, if we, while in the discharge of our duty as practitioners of medicine, become accidentally infected by those whose suffering we endeavor to mitigate."

These words of the late Professor Hodgen, of my Alma Mater—the St. Louis Medical College—were brought to my mind when, not long since, I discovered myself the victim of infection by one of my patients; and this paper is a report of my own case, describing, to the best of my ability, sensations experienced and symptoms produced while under the influence of noxious matter. It not becoming necessary during my illness to call in medical aid, I attended to the case myself, and the notes underlying this report were, under my direction, taken by my wife. My services as accoucheur in a case of miscarriage induced symptoms in me of such peculiar character that I thought it of interest to the profession to report the case to this august body, in order to elicit discussion, and perhaps throw light on points which to me are inexplicable. I had the day pre-

vious to attending the call contracted a slight abrasion of the skin on the index finger of my right hand, which I did not estimate, or had forgotten.

Shortly after digital examination, which revealed a dilated os and some of the waters to have escaped, this wound became irritated and painful, not unlike the effect mild acids produce on a denuded surface. I paid little attention to this, however, and assisted my patient until delivery was completed. On leaving the premises—perhaps two hours afterwards—I noticed my finger to be swollen and numb; later on I noticed this swelling and numbness became less and I thought no more of it. It afterwards became evident that irritating matter had also gained admission elsewhere. I had not long since been subjected to a furunculous outbreak over a part of my body—mainly the legs—a number of boils appearing at the same time, several of these, and especially one on my right knee, taking on carbunculous aspect. This latter may not have healed completely, or the skin may have been yet very tender; at any rate this spot also gave admission to poison into the circulation. The explanation for having my knee exposed to inoculation is this: As considerable post-partem hemorrhage had occurred, it became immediately necessary to change my patient's bed-clothing, and in my endeavor to lift her so as to enable the nurse to do this, my pants and underwear near the knee were saturated with blood. What the nature of the septic matter has been I am unable to say; my patient, a lady of my town, and belonging to good society, giving no clue as to its probable nature, and as the foetus was living when born, and seemingly in a healthy condition, decomposed matter was excluded.

At first I gave the possibility of its being of a syphilitic or gonorrhœal nature some thought, but as I could not bring the induced symptoms in compliance with known facts, regarding at least the symptoms of syphilis, I soon discarded this presumption as untenable, and as to inoculation with gonorrhœal virus, I confess to have but meager knowledge as to its effects and the symptoms induced, but from what I can gather from reports of experiments conducted by Dr. Bussey, I may with propriety assert that its effects differ essentially in character and are of a milder type than those it was my fate to experience. During the ensuing night swelling and numbness again supervened, and I observed then, for the first time, these same symptoms at and above the knee.

Sixteen hours after delivering the lady—at 4 o'clock A.M.—I commenced to shiver, and this feeling of being cold gradually increased to one of the severest chills I had ever experienced—and I have had many during my sojourn in malarious districts—the chill lasting over two hours. During this time I had no control over affected extremities, they being in a semi-paralyzed condition. Thermometer during chill showed my temperature to be 102° , pulse 100, slowly increasing to $103\frac{1}{2}$ and 110 respectively; perspiration hardly perceptible. In the course of the day swelling became enormous, nearing the axilla, causing the lymphatic glands in this region to enlarge and become painful. My leg also extended to the utmost, and inguinal glands, bubo-like, enlarged. Peripheral veins on arm and leg extended so as to bring the minutest into view, imparting to these extremities a most peculiar aspect. The place where the poison had been absorbed on arm and leg turned black as though cauterized with nitrate of silver. Temperature decreased during the day to $101\frac{1}{2}^{\circ}$.

I now resorted to my usual remedy for blood-poisoning: quinine and mur. tinc. of iron. Of a solution of two drachms of mu. of quinia and one ounce of mur. tinc. of iron, I took twenty drops every two hours. At night, 10 o'clock P.M., came on the second chill, lasting as long as before; symptoms of palsy accompanying the chill as before. Temperature during this time 102° , and rising again to $103\frac{1}{2}^{\circ}$, pulse 110, gradually declining to $101\frac{1}{2}^{\circ}$ of temperature and 100 of pulse; little perspiration. In the morning I took a saline cathartic and increased the dose of quinine and iron to twenty-five drops every two hours. At 4 o'clock P.M. of the third day after infection, I had the third chill, but of shorter duration; temperature did not exceed 102° and pulse 100. Numbness and tension of injured extremities somewhat less. I perspired freely, and enjoyed the first natural sleep since constitutional symptoms set in. Fourth day, temperature $101\frac{1}{2}$, pulse 100; swelling stationary. During the day blisters appeared on affected arm and leg, which, toward night, almost covered both extremities. The serum in some was cloudy, in others, transparent; they were of various sizes and form, the largest being round, having the diameter of a fifty-cent piece, the eruption resembling what is described in our text-books as pemphigus. On this day I missed having a chill, but had to be well covered in order to keep warm; restless sleep

during night. On the fifth day cinchonism perceptible, blebs absorbed and dried to crusts. Color of extremities otherwise regaining their normal complexion. Temperature 100°, pulse 100; had some control over affected limbs. Points of inoculation covered with a dark, dry slough, the size of a silver five-cent piece, line of demarcation plainly marked, the eschar reminding me of the artificial deadening of living tissue with bromine as practiced during the war in our hospital gangrene wards. From now on convalescence was established. A few days afterwards all swelling had disappeared, gangrenous sloughs under poultice treatment coming away, leaving a small granulating surface, which within one week more closed. Desquamation extended over entire body with the exception of my face, showing the effusion under cuticle to have extended beyond the infected extremities, although not noticeable at the time.

I had instructed my wife to call in medical aid on becoming irrational or unconscious, but my intellectual faculties were not disturbed in the least. I apprehended no danger nor serious consequences, and I intuitively felt that my powers of resistance would prove ample and sufficient to resist the invasion. I mentioned before that the *bullæ* appearing on the fourth day after infection on affected arm and leg, had some resemblance to the eruption peculiar to pemphigus. Some writers have described an acute form of this disease, accompanied by high fever and other constitutional symptoms, which comes as near describing my condition as anything that might be suggested in explanation, differing only in regard to the short space of time required for its appearance, the crop seemingly being exhausted within a few hours, and if my inoculation with poisonous matter had been less plain, or had from the outset not been demonstrated to a certainty, and above all, had not culminated in sloughing of the points of inoculation, I should have been inclined to ascribe the affection I had been subjected to, to other unknown influences, and having no connection with the suspected case of labor, but as everything pointed to transmission from this patient, I determined to look into the matter, and, if possible, to find some explanation, or come to some conclusion in regard to it. Owing to having been confined to my room over a week, these investigations were made at a rather late date; the fact is, there remained nothing to be investigated except the past history of my patient, she having meanwhile regained her

normal condition, was up and about, and as well and hearty as before.

As I already remarked, I am unable to define or give the nature of the noxious matter by which I became infected, but there is another question to solve, and one of really more practical importance, and that is, *to exactly determine the seat of trouble within this woman*. Apparently it would seem as though the vagina, from which my finger, after exposing it during examination, received the first irritation, had been the original seat of the toxicum, but a large quantity of blood, the greater portion of which had been lost after delivery, was equally imbued. That this could have been saturated to the extent it proved to have been, simply by flowing (passing) over a perhaps morbid vaginal surface, admits not only of some doubt, but is exceedingly improbable. More reasonable it would seem to locate the poison in the womb, and my investigations in regard to the past history of my patient corroborated this assumption. In this female, at a certain period of pregnancy, this organ (the womb) becomes unfit for its destined function—or its contents for further development—and no precautionary measures have thus far proved effectual in prolonging gestation after this period. Although the utmost pains have been taken—by quiet and rest—to carry her to full term, she has during her seventh month miscarried a number of times in succession—having myself assisted her once before—evincing an abnormal condition in a woman seemingly well qualified to overcome the burden peculiar to the pregnant state. She is, and always has been, of excellent health and endowed with a robust constitution; in fact, she is the very embodiment of sound and healthy womanhood. She tells me that in every instance—during her seventh month—without any provocation or untoward symptoms, a mucous discharge, resembling the whites, makes its appearance, scant at first, but daily increasing in quantity, until towards the last it becomes so copious as to require a constant absorbent bandaging in order to make her condition endurable, and advising her generally from eight to twelve days in advance of the approaching calamity. This discharge, according to her testimony, becomes tinged with blood a day or two before her confinement and previous to perceptible uterine activity.

Now, there is, as we all know, nothing remarkable or unusual in such discharges from the vagina during pregnancy,

and especially during the days preceding confinement, it being one of the measures of nature *preparatory* to future events, but it does seem likely to me that in this case the discharge is a symptom of morbid condition of or within the uterus; or, in other words, that the exuding fluid is some relation to her tendency to miscarry, and her toxic proclivities. I imagine this secretion to be, or to have been, the carrier of noxious matter from the womb. This matter, having there remained in a dormant state until imbued with life by advanced pregnancy, then exercises its nefarious influence by interfering with or checking the further development of the fœtus, and causing its premature expulsion.

But I am trespassing on your time, gentlemen, in my endeavor to explain causes and effect in this case, and as my object in writing this report has been to state only the facts as presented, and to report a case having uncommon features, and concerning us all from a scientific as well as a practical point of view, I shall refrain from indulging in any further remarks of a speculative character, and now submit this report to your consideration, and my humble effort to your kind indulgence.

Report on State Medicine.

BY GEORGE HOMAN, M.D., ST. LOUIS.

Read before the Medical Association of the State of Missouri.

Mr. President and Members: Having been appointed to present a report on State Medicine, at the present session, I have the honor to respectfully submit the following as an attempt in the direction of discharging the responsible duty imposed:

It will be generally conceded, no doubt, that in no branch or department of medicine is more rapid, substantial and satisfying progress being now made than in that of Public Hygiene, General Sanitation, or State Medicine, as it is variously termed. Every day we are coming more surely to know the causes of morbid action, and to recognize the agents and influences that make for disease and death in the human race, and along with this knowledge fittingly comes the suggestion and consciousness of powers and means to cope with these destructive agencies and to limit and define their sway if not to neutralize or destroy them

completely. These efforts in the past have been directed most largely against those forms of population infection that run their course among the people most swiftly—those pandemic seizures which startle and shock entire nations by the rapidity and fatality of their progress—which have decimated populations and then disappeared completely, perhaps, for an entire generation or more. Costly in life, health and treasure were the lessons taught to governments and peoples by visitations of exotic diseases, but probably no influences less rude, alarming and expensive than these could have availed to effectually arouse the public mind to the necessity for measures of prevention and precaution.

Safeguards against such swift infections as the plague, cholera and yellow fever being found effectual when intelligently understood and applied, reflection on the part of medical men and sanitarians showed that, notwithstanding the alarm and mortality caused by the epidemic appearance of such diseases as those just mentioned, by far the greatest constant mortality and morbidity rates among civilized peoples were caused by the purely domestic pandemics, such as tuberculosis, diphtheria, scarlet fever and typhoid fever. Experience, observation and statistics alike have served to show that the first named disease, as a factor of disability and death, steadily outranked all others in the list of mortal causes, or indeed any two or three of them combined; hence came a realization of the fact that right at hand, within our own doors, lay the most difficult task set for State medicine to achieve; namely, the conquest of the "white plague of the north," whose domain, however, knows no territorial limit, but whose powers are felt most severely in the most crowded populations, in countries where the science and civilization of to-day have reached their highest pitch.

Not the least part of the merit due to Koch lies in the circumstance that with a voice to which the nations gave ear he drew the attention of the civilized world to this momentous fact, and that while he held out to the medical profession a preparation which he modestly hoped would prove a remedy to many who were suffering from tuberculosis, he at the same time dwelt with especial emphasis on the necessity for prevention, pointing out most cogently that even if cures were achieved through his lymph, still the danger of reinfection would constantly remain if the utmost diligence was not employed to destroy the matters expectorated by

consumptive people, and thus to lessen as much as possible the danger to the public from this source. State medicine owes many debts to Koch, and if it be granted that tuberculosis is the greatest morbid danger that impends over the human race, then the obligation and duty rest heavily on us to recognize this authoritative warning and diligently teach and preach the necessity for the quick destruction of all secreted and excreted matters that contain the germs of tubercular disease.

The year 1890 will be memorable for all time for the signal and decisive manner in which the forces of medical science have been formally and definitely arrayed against man's greatest physical enemy, and to the importance given to prevention by the great German leader and exponent of the doctrine of the germ causation of disease; and therefore interest, from the present standpoint, must center in Koch's discovery and warning in connection with it, and his announcement in regard to tuberculosis must be held to constitute the one striking, overshadowing event in State medicine for the twelve months that have elapsed since the last meeting of this Association. And in this circumstance lies the reason for the prominence given to this topic to the exclusion of other subjects germane to such a report as this. As tending to show the weight of Koch's counsel on the prevention side of the question, of its practical application by working sanitarians, many of whom had already reached independent conclusions on the subject, I may say that at the meeting of the National Conference of State Boards of Health, held in Washington on the 4th inst., the question, What should State and Local Boards of Health teach, and what should they do to prevent consumption? was a principal subject for discussion, and was debated from an altogether practical standpoint by the experienced public health men present at the meeting.

The conclusion reached was that those official bodies should endeavor, in every possible way in which they can reach the people in their homes, to urge the destruction by fire of all matters expectorated by consumptive persons, or by those in whom it appears probable that the disease may exist; and the question as to placing tuberculosis in the list of quarantinable diseases will no doubt engage the formal attention of the Conference at no distant day.

All of which is respectfully submitted on behalf of the committee.

Menieres Vertigo.

CLINIC OF PROF. CHARCOT.

Translated from the French for the CINCINNATI MEDICAL NEWS by Dr. H. Illoway, Cincinnati, O.

A man fifty years of age, coachman, presented himself at the consultation, complaining of vertigo, with which he had been afflicted the last four years. About a year ago, in one of these attacks, he fell prone and was wounded on the head. The attacks, which have since frequently recurred, are preceded by a humming or hissing of the ears, and are sometimes followed by vomiting. There is no complete loss of consciousness. These symptoms together constitute the ordinary type of menieres vertigo. The ear is the point of departure of these accidents, and it can be said that all the affections of this organ may be reflected upon the labyrinth and act through this mechanism; thus the lesion is but of secondary importance, except in the case of a plug of wax, where, by a removal of this, we can almost instantly cure the disease. But even where the lesion is but slightly accessible, therapeutics enable us to act with certainty upon the vertigo. An interesting point in the history of this man is this, that he has been in several hospitals and his malady remained unrecognized; even leeches were applied, a practice exceedingly injurious in this disease, for all loss of blood, all anæmia, usually exasperate the accidents.

M. Charcot has long since formulated the plan of treatment to be pursued in these cases. It consists in the administration, twice daily, at meal-time, of 40 centigrammes (= about viss grains) of quinia sulphate—80 centigrammes (= about xiii grains per day); this is continued for fifteen days. The medicine is then discontinued for eight days, and is then resumed in the above described manner. Usually, after four or five such periods of administration with their intervals of discontinuance, a cure is generally obtained. Under the influence of this medication there is, sometimes, at the outset of the treatment, an exasperation of the noises in the ears and of the vertigo; but improvement manifests itself very soon.

It is to be noted that the form in which the vertigo presented itself in the present case is very easily modified; but it is not so in certain other forms, which may be said to be

composed of two elements: an acute element, constituted by the attacks separated by longer or shorter intervals from each other, and a chronic state, characterized by less marked vertigo, but which is incessant and compels the patient to remain in his room, and sometimes even to avoid every species of movement. In these cases the sulphate of quinine does not succeed so quickly, and sometimes it requires seven or eight months to obtain a beneficial effect.

The vertigo of meniere is relatively frequent and sufficiently easy of diagnosis; nevertheless, the greater number of patients whom Charcot had seen had been the objects of errors of diagnosis, and often treated by the most various and inopportune means. The attention of every physician should be directed to the points set forth.—*Un. Med. d. Can.*

THE ADMINISTRATION OF CREOSOTE BY RECTAL INJECTION
(FOR TUBERCULOSIS), BY DR. REVILLET.

R _y	Aq. Destill,	200 grms.
	Pure Beechwood Creosote,	2-4 grms.
	Ol. Amygdal dulc.,	25 grms.
	Vitel Ovi.,	I.

The creosote is first dissolved in the oil, then the mixture is emulsified with the yolk of the elk. A well united liquid, homogeneous, milky in appearance and yellow in color, is thus obtained. If it be desired that the emulsion be still more fixed, a few centigrammes of G. Tragacanth can be added before pouring on the water. I employ by preference the oil of sweet almonds because it dissolves the creosote perfectly, because it does not cause any colic, and because it contains fatty matters which constitute an adjuvant not to be despised in the superalimentation of tuberculosis. The injection is taken ordinarily in the evening before retiring. It is better retained in the night than during the day, where he is liable to make such efforts. The first time the bowels must, as a preliminary, be well washed out with warm water. After several days this precaution becomes unnecessary. The next morning the patient has a more or less dry, consistant stool, and containing hardly anything but a few drops of oil. He takes every evening an injection of about three grms. of creosote, at most four grms. We thus give, during a month, 90 to 100 grms. of creosote. This amount is quite considerable, and I do not believe that any other method exists by which so large a quantity of the drug, and which, by the way, is perfectly absorbed, can be

absorbed in the same period of time. The symptoms of absorption manifest themselves rapidly and are most characteristic. The patient perceives, almost instantaneously, the taste of creosote in his mouth. The urine changes in color; it becomes blackish or of a greenish tint.—*Ibid.*

TREATMENT OF TUBERCULOSIS BY ARISTOL.

M. Nadaud has communicated to the Academy of Medicine the following formula :

R_x Aristol, I grm.
Ol. Amygdal dulc, . . . 100 cub. centimetres.

M.—Inject two cub. centimetres of this solution beneath the skin, morning and evening. The effects will be prompt. The aristol is not toxic; it has no local action. After twenty-five days certain patients, of the first and second degree, were so much improved that they considered themselves cured.—*Ibid.*

Selections.

The Menopause, or Change of Life.

BY T. GAILLARD THOMAS, M.D.

Professor Thomas, in a paper published in the *Annals of Gynecology and Pediatrics* (May number), brings out some valuable points, both for the specialist and general practitioner, pertaining to the menopause.

Dr. Thomas introduces the subject by dividing woman's life into four great periods. The first, of fourteen years, during which she is preparing for the functions of ovulation and menstruation, or the period of puberty. For the next six years she is preparing for the functions of sexual intercourse. After that for two or three years she awaits the third function, that of maternity or parturition; and finally, about the fiftieth year, she is prepared to pass into the "sere and yellow leaf of life"—the period known as menopause.

He says that from fifty to seventy, which is the normal end of her pilgrimage, she undergoes a retrograde metamorphosis. The organs which have been, up to this time, maintained in a state of busy activity, now begin to retrograde, the ovaries shrivel, the Fallopian tubes shrink, the uterus becomes smaller and more insignificant, and the

vagina gradually contracts, unless matrimony be continued into old age and prevents such a result. These organs during this process become subject to certain diseases, of which I am going to speak.

Formerly in the profession of medicine, and at the present time among the laity, a great significance is attached to the "change of life," and many affections which have nothing to do with it are attributed to its instrumentality.

A woman arrives at her fiftieth year and suffering from metrorrhagia; that is, she flows steadily all through the month. She consults her doctor, and he tells her that this is the change of life. She then tells him she has a great deal of pain and a profuse watery discharge. It is nothing more than the change of life, he repeats. She goes to another physician, who does not quite agree with this diagnosis, and he discovers she has a cancer of the cervix that is steadily progressing. Again, a woman consults her friends and her physician on account of an abnormal enlargement of the abdomen at this time of life. She is told that it means nothing. These enlargements, she is assured, come on at the time of the menopause. She goes to another physician, who does not agree with this view of the case, and examination reveals the existence of a large ovarian cyst. These conditions are not dependent on the menopause at all. The period is much less important than was formerly thought.

As the uterus undergoes atrophy, that of the cervix may be out of proportion to the atrophy which is going on in the body. As the body of the uterus contracts, the cervix contracts to a greater degree, and gradually closes, while the uterine mucous membrane is still giving forth a discharge of mucus, which any uterus is apt to do, and the cervix shuts itself up together and prevents the escape of this fluid. Under these circumstances the uterus in rare cases becomes distended by air, water, blood, or muco-pus. So rare are these accumulations that many are inclined to doubt the validity of physio-, hydro-, hemata- and pyo-metra. These diseases do occur, but during a practice of thirty-eight years I have seen but three cases in all. Collection of air in the uterus after the menopause is the result of a fermentative action in the retained fluid. A woman, at fifty years of age, has had a uterine catarrh which invaded the Fallopian tubes, and the fluid secreted by the diseased mucous membrane has been pouring through the cervical canal. The secretion

occurs up to the last moment before closure of the cervix ; air enters the uterine cavity, and you may have, as a result of fermentation, a uterus distended by gas.

The last case of this kind that occurred to me in practice was a lady sixty years of age, under the impression that she had a cancer of the uterus. Three practitioners concurred in the diagnosis, basing their opinions upon the following symptoms on the part of the woman. She had stopped menstruation ten years before the occurrence of her present symptoms. As she was walking about the floor one day there occurred suddenly from the vagina a gush of fluid, of a pinkish watery character, and of a disagreeable odor. The patient felt entirely relieved from a sensation of abdominal fullness previously felt, as a result of this explosion. Since that time, every two months, she has had a similar discharge, and the physicians accordingly made a diagnosis of cancer of the endometrium. Upon examination of the lady's abdomen, I found there a globular mass as large as the head of a young child. I at once suspected hydro-metra, and determined to test the diagnosis. I put her under an anæsthetic, forced a uterine sound through the cervical canal, after first snipping the external os with a pair of scissors. I then carried a dilator through the cervical canal, and, as soon as I forced its blades apart, about ten ounces of a dirty, pinkish fluid gushed out. I next took the curette and passed it over the entire surface of the uterus, scraping it with moderate force, thinking she had hydatids of that organ. I found it free from any such condition. I next passed a glass stem through the cervical canal, and the patient was cured from that very moment.

As the vagina undergoes atrophy, a peculiar condition, that I want especially to draw your attention to to-day, takes place after the menopause, which is known by the name of senile vaginitis. This affection occurs both in widows and in virgins, but is not commonly found in married women, for the reason that contraction of the vaginal canal does not develop in them with as much certainty as in the two former. There are two varieties of this senile vaginitis, the one being styled the adhesion and the other the hemorrhagic. The first form results in closure of the vaginal canal, and this closure may occur throughout its entire length, wall being firmly glued to wall by an adhesive inflammation. If such a woman has been in the habit of using injections, she is alarmed by the fact that she can not introduce her finger freely into the vaginal canal.

Now, if you have not had your attention drawn to this pathological condition, let me tell you one mistake that you may make. You will conclude that there is closure or atresia of the vagina, and treat the pathological condition as you would have done had it occurred in a young girl of thirteen, who is preparing for the great functions of menstruation, sexual intercourse and parturition. What is the use of the vagina to this old woman? None whatever! The main point that I wish to insist upon in reference to such a case is to let it alone.

Let me suppose you another case: A patient, say sixty or seventy years of age, it matters not whether she be a married woman, a widow, or an unmarried woman, she has been free from anything like menstruation for ten years or more, and she suddenly has a return of her menstrual flow. Now, never believe in the return of the menstrual period after the full accomplishment of the menopause. You may find a woman stop menstruating before she is fifty, for two or three years, and then begin again. Now, after she has passed fifty years of age, and has ceased menstruating, and again begins to pass blood from the vagina, examine that woman, and in ninety cases out of a hundred you will find malignant disease somewhere in the genital tract as a cause of the flow. The woman whose case I was supposing has been ten years without menstruating. Her physician makes a diagnosis of cancer, and bases his treatment on that diagnosis. The woman may have nothing simulating cancer in its pathology at all; she may have a hemorrhagic vaginitis. The red corpuscles and the watery portions of the blood are poured out of the walls of this old used-up vagina, and when you make an examination you find the upper two-thirds of the canal as red as blood. As you take a sponge and pass it over the surface, you will find that the vagina is affected by a true bloody sweat. You know that the bloody sweat spoken of in the Bible is a reality. Treat this condition by separating one wall of the vagina from the other constantly by means of a glass vaginal plug, making alterative applications to the parts at times. Plug the vagina with iodoform gauze, and put the patient upon general tonics for the restoration of her blood state, and you will cure this supposed case of cancer in two or three months, and relieve thereby your patient from the prospect of an absolutely certain death.

Another diseased condition resulting from the menopause, which requires careful consideration and study, is a form of

senile hysteria that develops in a woman just about the time of the change of life, at the time of the menopause, when the woman ceases to menstruate, and the sexual organs are undergoing an important retrograde metamorphosis; the mind, in sympathy, is affected by senile hysteria, or melancholia, which often lasts for years.

I come now to speak of a mechanical derangement, which is, in a certain number of cases, directly dependent on this time of life. The uterus, you know, is held in position by ligaments; the vagina in no way contributes to its support. The uterus may descend from its normal position in the pelvis into a position which is called procidentia, but which I prefer to designate as prolapse in the third degree. There is, besides direct violence, another and different cause for this trouble. The uterine ligaments are made to support a certain weight; double that weight, treble it, and down comes the uterus out of the body, the uterine ligaments being unable to perform an excessive function. Again, there may be no pressure from above, no increased weight on the part of the uterus, and no loss of tone in the ligaments, and yet traction from below will cause the uterus to descend. After the menopause the vagina loses all of its surrounding support in the form of fat, and traction is brought to bear upon the uterus. The fatty tissues that surround the vagina are absorbed, at this time, as they are elsewhere throughout the body. Now, when the fatty tissues around the vagina are absorbed, the canal itself drags upon the uterus, and as the vagina comes down it draws the uterus with it, and you will find in a woman who has passed the menopause, and who is making no undue effort, and who taxes her strength less than formerly, a prolapsed uterus.

It may have occurred to you, as I have run hastily over this subject, giving you only a bird's-eye view of it, that I was inclined to advise pathological conditions that a woman may develop. I desire especially to guard you against this error. I commenced by telling you that there were four great elements that must exist in every woman before she can present a picture of perfect health. The blood state must be normal, her nerve state must be good, her muscular condition strong, and her mental state well poised before she can be pronounced a sound woman, with *mens sana in corpore sano*. Let me warn you against two things: (1) Against becoming specialists too soon; and (2) against be-

coming specialists in opposition to common sense. A gynecologist who is always looking at disease through the vagina is a harmful and dangerous man. Specialism tends to narrow the mental vision, to limit the pathological view, to disturb the mental balance. Beware how you allow it to do so with you! These are the evils; its advantages far outbalance them, very far; and I look upon specialism in medicine, when freed from the evils which I have mentioned, as one of the great agents of its advance. —*Med. Progress.*

Report of Clinical Cases.

BY F. D. BULLARD, A.M., M.D.,

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On October 2 a man applied for medical treatment at the hospital who gave a peculiar history. He said he was by profession a cook; that in some way he had incurred the displeasure of his comrades. It is quite probable that his cooking had ruined their digestion; at any rate, as a method of retaliation, three of them had, on the evening of the 1st, caught him and forced a large object into his rectum. Upon digital examination a smooth substance was felt completely filling the rectum. The patient was anæsthetized, the sphincter thoroughly dilated, when a large potato presented. As it was in a transverse position a well-known gynecologist, who chanced to be present, performed version, but the spud still refused to be born, although it was evidently headed in the right direction, as its eyes could be distinctly made out. After some unsuccessful attempts at removal with forceps a teetotaler suggested the use of a corkscrew. A large one was accordingly imbedded in the potato, but pulled out twice, while the doctors looked at the corkscrew on the floor and in the rectum for the refractory "Murphy." The next step was to perform craniotomy, but without avail. Finally with "a long pull, a strong pull and a pull altogether" with the corkscrew clear through the potato and a large retractor passed behind it, the obstinate spud was delivered. Its diameters were 2, $3\frac{1}{2}$ and 4 inches, and it measured $8\frac{1}{2}$, $9\frac{1}{2}$ and 12 inches in circumference, weighing a little over $8\frac{1}{2}$ ounces. There was no rupture of

the perineum, not even tears in the mucous surface of the sphincter.

A large rectal douche was given, thoroughly washing out the bowel; although the divulsion was very wide, the man was "water tight," holding the enema and evacuating it at will. Aside from the fact that when sitting down he sounded carefully before striking bottom, he was all right, and on the third day left the hospital. The man denied being intoxicated, saying he had only taken one glass of beer that day.

Two cases of apoplexy occurring within the last two weeks are of interest on account of the situation of the hemorrhage.

On September 22 an old man about seventy years of age was brought in from Antelope Valley. His attendant knew little about him, other than that he was a nervous old gentleman whom everybody called Uncle Dick. He also told us that early that morning Uncle Dick had had a quarrel, became very excited, then sank down in a chair and immediately lost consciousness. On his arrival at the hospital, coma was profound, it being impossible to arouse him at all; the pupils were contracted, respiration stertorous, while about every third inspiration was full and quick; later in the evening his breathing became Cheyne-Stokes in character. His pulse was full and about normal, but grew weaker and more rapid in a few hours. Temperature somewhat elevated and perspiration quite profuse; he urinated in bed, but had no passage of the bowels.

At the autopsy there was found to have been a profuse hemorrhage, forming large clots in the cerebellum, fourth and third ventricles; in the latter there was also a large amount of bloody fluid which distended both it and the lateral ventricles. A small clot was found in the left calcarine fissure. All the arteries of the brain were decidedly atheromatous. There were also cysts in the choroid plexuses and evidences of an old meningitis.

September 30 John W., an Irishman about fifty-four years old and an epileptic, was brought to the hospital in a semi-comatose condition, having fallen in a supposed epileptic fit that afternoon. If spoken to, he could be roused from his condition, he understood what was said to him, would put out his tongue and attempt to answer inquiries, but his speech was unintelligible. His right side was paralyzed—the arm and hand completely, while he retained

limited motion of his leg and foot. Pupils normal, pulse full and slow, breathing loud. He took liquid nourishment and had control of his urine and feces.

On the fourth day he became suddenly worse, the stupor deepened, temperature rose, pulse became quick and weak and he sweat quite profusely. He died on the morning of the fifth. The post-mortem examination revealed the fact that there had been a rupture of the left lenticulo-striate artery, producing a subcortical lesion, and that later this hemorrhage had filled the left lateral ventricle. It was also discovered that some of the arteries were atheromatous, that there were choroid cysts and that there were some small bony plates in the left frontal ascending convolution. The amount of cerebro-spinal fluid was large.

Two other cases occurring side by side baffled several physicians to correctly diagnose, the true nature of their trouble being discovered only on the post-mortem table.

A. G., aged forty-four years, a native of New York, entered the hospital April 1, 1891, complaining of a dry, troublesome cough. A laryngoscopic examination revealed an inflamed larynx; on careful investigation slight dullness in the right apex was found. He gave a history of some six weeks' illness following la grippe, and it was accordingly supposed that he was suffering from incipient phthisis. He was therefore put on cod liver oil and local treatment, with sprays tried in vain for the cough. He suffered from insomnia and constipation and was quite feverish. On May 10 he thought he was not improving and left the hospital to take care of some horses. June 24 he returned in a much worse condition, attributing his failing health to improper accommodations. On examination the right lung was apparently almost entirely solid, vocal fremitus distinct, with sharp bronchial breathing in the upper third. Constipation and sleeplessness remained the same. New symptoms developed; he now complained of great pain in the back and had scanty urine. There was, however, no albumen found. A few days later the right testicle became suddenly swollen and painful, but hot poultices and belladonna ointment dispelled our fears of tubercular orchitis. The pain in the back increased, strong opiates were required for its relief. About July 29 he developed œdema of the neck and face and the following week a sudden and great swelling of the left arm—the swelling being preceded and accompanied by intense pain in the arm. At this time it

was noticed that the superficial cervical glands on the left side were enlarged. The œdema of the arm subsided in a few days and reappeared later.

A tumor in the thoracic cavity was then suspected. At this stage dysphagia was marked, the superficial veins on the left arm and on the body became tortuous, enlarged and very blue, forming a sort of azure girdle around the body—this last symptom indicating pressure on the azygos veins.

The œdema of the upper extremities increased, and during the last week extended to the lower extremities, while there was an ugly hemorrhagic chemosis in both eyes. If deprived of morphine, he would fairly howl, so the last two weeks he was stupid from the drug.

August 20 he died and an autopsy was held. The lumbar and thoracic lymphatic glands were very much enlarged, forming in some instances tumors three or four inches in circumference; a large tumor was found over the head of the pancreas; both innominate veins, the superior and inferior venæ cavæ, right primary bronchus and arch of the aorta were pressed upon. The splanchnic nerves and the spermatic plexus also suffered from pressure. A tumor occupied the apex of the right lung. The lung was adherent at the apex and collapsed from an exudate of fully two quarts in the pleural cavity. Although as yet the specimens have not been examined by the microscope, they are probably multiple carcinomata.

What is Expected of Medical Men.

The opening of the session is not a bad time for reminding our younger readers that something more is expected of medical men than a knowledge of those numerous subjects the study of which constitutes the curriculum required of medical students. All the anatomy in Quain or Ellis, and all the physiology in Michael Foster, combined with the therapeutics of Ringer or Brunton, will not of themselves constitute an ideal medical practitioner. There are other books which he must study and qualities which he must possess than are implied in the study of such authors as we have mentioned. There is a book whose authority is unique and whose eloquence has no rival, to which we owe the Ten Commandments, the Sermon on the Mount, and the great eulogy on Charity, which can not be neglected

with impunity, and can not be studied without imparting dignity to character, and even to style. There are other books which deal particularly with the ethics of the profession itself which are quite special, having reference to the exceptional conditions of human nature as affected by sickness, the delicate rights of patients, and the equally delicate rights of the medical man in regard to his relation to patients on the one hand and medical brethren on the other. The man who can not make allowance for special conditions of the sick has no business in the medical profession. He may be strong and muscular—the more so the better—but he must be gentle in his words and tender in his touch. Some of the strongest men are the gentlest. It can be seen equally in the way they percuss a patient and in the way they interrogate him. There is something in their gentleness which makes them great. This quality almost seems curative in the sick chamber.

*Sunt verba et voces, quibus hunc lenire dolorem
Possis, et magnam morbi deponere partem.*

The great work in which the character and duties of the medical man are discussed is that of Percival—"Medical Ethics; or, a Code of Institutes and Precepts Adapted to the Professional Conduct of Physicians and Surgeons"—and students and practitioners would do well to possess themselves of it and to cultivate the sentiments and the principles which it so well expounds. But there are other ways of studying the great ethics of our profession. One of the best of these is in the study of medical biography. The life history of a man like Dr. Fothergill, and his account of his friend Dr. Alexander Russell, read before the College of Physicians in 1769, is an inspiration to all that is high and unselfish in medical life, and teaches us how wide and yet how minute are the sympathies of true medical men. Fothergill's description of Russell, who settled in Aleppo, and acquired there an enormous fame, may well be reproduced, not only as a piece of rare medical eloquence, but as a masterly portrait of medical character: "The Pacha himself became acquainted with the merit of our deceased friend, consulted him, called him his friend, found him upright, sensible and sincere; as a man, polite without flattery; decent, but not servile; as a Christian, true to his principles; disinterested and generous as a Briton; and in point of skill as a physician superior to every one. A nat-

ural, even, cool and consistent temper; a freedom of behavior as remote from confidence as from constraint, improved by reading and conversation; a mind imbued with just reverence to God, and impressed with a sense of the duty we owe; an understanding fraught with the principles of the profession to which he had been early devoted (the practice of physic), happily blended with great benevolence—was a character seldom to be met with in the Asiatic regions. This, however, was the character of our colleague."

Such characters may seem rare in every age, but they are perhaps less so than we imagine. At any rate, they constitute the type of what all medical men should be. We are pried every week with fine questions of professional behavior and character; sometimes arising in the mind of the physician himself, sometimes emanating from a rival practitioner or a critical patient. Such questions are most times honestly enough conceived, and they would soon be generously disposed of in the lights of such a portrait as that depicted by Fothergill. There are such men in every neighborhood, "upright, sensible, sincere." The study of such characters in medical history, we repeat, is as important to every practitioner who would uphold the dignity of his profession as the study of anatomy or therapeutics. The moral element of the profession is one source of its strength. It has always been on the side of virtue and of temperance. There may have been individual exceptions, but the profession has not been involved. It has not recognized the voice of the practitioner who has seemed to sanction vice or to lessen the abhorrence of it. Vice in all its forms is easy enough without assistance or encouragement from the profession which sees so much of its results. Apart from the direct bearing of medical considerations in questions of vice and virtue, the medical man himself is a factor in the formation of public opinion. Those who would shut a medical man up in a sick-room, and deny him an influence in social and public questions, injure the community. But to intervene efficiently in such questions he must intervene quietly and impartially, as a student away from the strife of parties and of sects. His influence must be rather that of an expert than a mere politician, of one who sees deeper into miseries and maladies than others do, and who can not be satisfied with anything but true and proved remedies.—*Lancet*, Oct., 1891.

Endo-Uterine Therapeutics.

Dr. More Madden, in a paper on the above subject, said, with regard to the methods of modern intra-uterine treatment and the conditions by which this is called for, his observations are founded on a clinical experience extending over many years, and embracing upward of ten thousand gynaecological cases treated in his wards or in the extern department of the Mater Misericordiæ Hospital, Dublin. Of the cases admitted into those wards during the last fifteen years, endo-uterine treatment was found necessary in thirty-five per cent. The two essential points in all such treatment are: First, that the orifice and cavity of the uterus, if not already sufficiently dilated, should be mechanically expanded; and, secondly, that whatever application is resorted to should be brought into direct contact with the diseased endometrium. For the first purpose the slow, painful and hazardous methods of dilatation by sponge or laminaria tents have been long abandoned by Dr. More Madden, who employs in their stead the rapid cervical dilator which Messrs. Arnold have brought out in accordance with his suggestion, and which he finds more effective and quicker in its action than Hegar's or other similar dilators. The second object is especially necessary as a preliminary to endo-uterine treatment in cases of congestive hypertrophy and chronic subinvolution, in which the lining membrane of the uterus is commonly overlaid by an impervious pseudo-membranous albuminoid neoplasm evolved from the proliferating cilia of the diseased surface. Or else the endometrium, in many cases, is so thickly bathed in the tenacious morbid secretion therefrom, as effectually to protect the underlining tissues from the action of any remedial agent introduced into the uterine cavity until that pseudo-membrane and secretion are removed by the curette. For these objects Dr. More Madden recommends, firstly, the use of Duke's cervical curette to cleanse out the entrance to the womb; and, secondly, the employment of his own Adjustable Uterine Curette, by which the endometrium may be thoroughly denuded, and at the same time by the hæmorrhagic discharge thus occasioned the congestion of the hyperæmic and hypertrophied organ may be most effectually relieved.

In the treatment of subinvolution the author advocates the introduction, in some instances, of a small tampon sat-

urated in a combination of tannic acid and turpentine, which he termed "Tanno-terebinth." This acts as an immediate stimulant and astringent on the uterine structures, and in suitable cases is allowed to remain in the cavity from twelve to twenty-four hours, unless sooner expelled from the then generally much contracted uterus. The vaginal glycerine-saturated tampon commonly employed in cases of this kind, although unquestionably serviceable in many instances, is messy and troublesome in its use both to patient and practitioner, and hence for some time past the writer has generally adopted the boric acid, or "dry treatment," recommended by Dr. Duke, and which he has found generally very satisfactory as a substitute for the older method of treatment. He also strongly deprecates the employment of the ordinary syphon syringe for any endo-uterine purpose, and believes that this should be replaced by an irrigator such as the one he suggested many years ago, and which, having been since appropriated by others without any acknowledgment, is depicted in the paper of which this is an abstract. The foregoing measures must, however, be supplemented by more active agents in those more serious cases of long standing, fundal or corporeal endometritis and subinvolution, in which the disintegrated and eroded endo-uterine mucous membrane becomes the seat of various pathological changes, extending to the submucous structures and utricular glands, and often associated with those so-called fungosities resembling papillary epithelioma, which, if checked, may ultimately degenerate into that condition. In such cases it is that the cautery, actual or potential—the first in the form of igni-puncture, and the latter in the shape of stronger caustics, acid, nitrate of mercury, fuming nitric acid, or chromic acid, etc.—may be justifiably resorted to in endo-uterine treatment. In conclusion, Dr. More Madden briefly detailed the result of his clinical experience in these various applications, the circumstances that indicate their use, the dangers that may attend their abuse, and the methods of their employment.

It was also thought, in selecting dilators for use, the amount of dilatation required should be considered. In some cases it is only necessary to dilate to a small amount to admit a curette; in other cases a large amount of dilatation is required to admit the finger to explore the uterus. He wished to know in what case of chronic intra-uterine disease Dr. Madden recommended intra-uterine douching with

hot water. After labor or abortion, or operations on the interior of the uterus, it is frequently done, but in these cases the cervical canal is patulous. In chronic cases the cervix should be kept in a state of sufficient dilatation to admit a Boazman's catheter, if uterine douching were carried out daily, as recommended by Dr. More Madden. As to the use of caustic, the most important point was to apply the caustic directly to the mucous membrane, which is frequently very difficult on account of the mucous secretion filling the uterus and cervical canal.—*Med. Press.*

Cocaine in Urethral Surgery.

In December, 1886, Dr. W. Frank Glenn, of Nashville, Tenn., introduced a bulbous bougie in a patient on whom he had cut a stricture three inches from the meatus; also enlarged the meatus. He prepared a fresh eight per cent. solution of muriate of cocaine, and injected a small quantity (without measuring) into the urethra. Ten seconds had nearly passed when patient excitedly asked, "Will that put a man to sleep?" Dr. Glenn answered, No; that its effect was only local. By this time the patient was unconscious, muscles jerking, eyes rolling upward, mouth frothing, and every few seconds entirely ceasing to breathe. He was thoroughly and completely poisoned by the cocaine. It required the active work of three other physicians and himself one hour and fifteen minutes to prevent death. At last, however, he began to breathe naturally, and soon returned to consciousness without any ill effects whatever resulting therefrom. He then resolved to use cocaine (of any strength) no more on a recently cut or denuded urethra. He has since had no unpleasant results until September 24, 1890. Seeing that Glück regarded a mixture of cocaine in a weak phenol solution as entirely void of any danger, he again tried it in a urethra which had been incised at the meatus just forty-eight hours previous. The solution was prepared after Glück's formula with the exception that instead of adding ten grains of cocaine to the drachm, he only put two and one-half grains. He took a small quantity in the syringe and injected into the urethra, not holding it in, but allowing it to escape immediately. He turned to his instrument case, and immediately the patient raised up and asked, "What is this?" and fell back, going at once

into the regular cocaine spasms, from which, in twenty or thirty minutes, Dr. Glenn feared he would lose his life. The symptoms were exactly those of his former patient, though not lasting so long.

These two experiences, with one other, in which the effects were well marked, but not alarming, will cause him to be very careful in the use of cocaine on absorptive surfaces. In the mildest case of the three, the urethra had not been incised at any point, but was ulcerated, and bled upon the slightest touch with an instrument. From these cases he draws the following conclusions:

1. Cocaine is a most potent and wonderful local anodyne, but not void of danger.
 2. Its use should be positively forbidden in the recently cut or denuded urethra.
 3. Prepared after the manner of Glück (with phenol), it is equally unsafe to apply to the abraded urethra.
 4. The use of cocaine in the urethra is attended with more risk than when applied to any other part of the body.
- South. Practitioner*, April, 1891.

Pruritus Ani and Vulvæ.

Dr. Augustin Gœlet (*Archives of Gynecology, Obstet. and Pædiat.*, March, 1891) disparages the treatment of pruritus by simple application of any lotion. The vagina, he insists, should be daily cleansed with a solution of peroxide of hydrogen (one part to three of water), best administered as a spray. The parts being dried by absorbent cotton, the whole vagina and vulva should be dusted with Squibb's pure boracic acid in fine powder. The neighborhood of the anus is, in cases of pruritus ani, to be cleansed with spray, dried and powdered in the same manner. The parts must not be washed with soap. After dusting the vulva and vagina, the medical attendant must place a thin layer of absorbent wool, which has been dusted with the same powder, between the folds of the labia and majora and between the nates, close to the anus and perineum, so as to prevent the contact of two irritating surfaces. The wool must be changed directly it becomes moist. Dr. Gœlet says that the above treatment will effectually relieve the pruritus, but can not prevent its return, as it does not cure the cause. Discharge from the vagina frequently causes pruritus ani in women, though the possibility of dis-

charge from a fistula or some other rectal disease must not be overlooked. Pruritus vulvæ is most frequent in pregnant women with chronic endometritis and extensive erosion of the cervix. A few applications to the cervix of Churchill's tincture of iodine (which should be five times the strength of the ordinary tincture) every third day, and a douche twice a day of a solution of creolin, will frequently effect a speedy cure. The most prompt and effective method of treating endometritis, as well as erosion of the cervix, is by galvanic applications to the uterine canal, or to the cervix alone when the disease is confined to that part. Dr. Gœlet makes the above observations in a notice on a lotion recommended as a remedy for pruritus in the *Canada Medical Record*. The lotion consists of hypophosphite of sodium one drachm, carbolic acid half a drachm, glycerine one ounce, and Listerine three ounces.—*Brit. Med. Journal*.

Retention of an Almost Full-Term Placenta for Two Months.

In the *Indian Medical Record* of last month the editor, Dr. James R. Wallace, relates a very interesting case of retention of a placenta for nearly two months without any unfavorable symptoms supervening. The facts are peculiar. He was called to attend a woman during her second delivery, which had come on at the eighth month. He found the head low down in the pelvis, and the expulsion of the child terminated naturally. While waiting for the uterine contractions to expel the placenta he received an urgent message, and left the midwife to see to the after-birth. He did not visit the patient again, but about two months afterwards he was called, to find her in great pain. There was some hæmorrhage, and on examination the uterus was as large as a child's head. The os was somewhat dilated, allowing two fingers to pass which touched a fibrous mass, found to be the placenta. On inquiry he ascertained that the midwife, finding the after-birth did not come away within an hour, concluded that probably "everything had come away," and forthwith applied a bandage. The discharge ceased in about ten or twelve days, and the woman got up, going about her work without any discomfort, pain or sense of weight. On applying compression over the fundus uteri, the placenta, quite fresh in appearance and without fœtus, was expelled.—*Lancet*.

The Limitations of Bacteriological Therapeutics, with Special Reference to Tuberculosis of the Lungs.

BY E. P. HURD, M.D., OF NEWBURYPORT, MASS.

Read before the Climatological Association, Washington, D. C.

I shall discuss my subject under three heads: 1. What is meant by bacteriological therapeutics? 2. The limitation of bacteriological therapeutics in infectious diseases in general. 3. The limitation of bacteriological therapeutics in pulmonary tuberculosis.

1. BACTERIOLOGICAL THERAPEUTICS PRIMARILY ANTAGONIZE BACTERIA.

There is now a general consensus of belief in the bacterial origin of all infectious diseases. That all communicable maladies, such as can be imparted from plant to plant, from animal to animal, from the animal to the human being, from one man to another, are due to micro-organisms, in such a sense that without the latter the diseases would be non-existent, is not now a matter for debate; there are sufficient scientific facts to prove the proposition in its application to many of them, and, from what we know of the uniformity of natural laws, the inference is irresistible that all are microbic diseases. Among the bacterial diseases of the lower animals whose causal agents are known, we may enumerate fowl cholera, the contagious acne of horses, pigeon-pox, American swine plague, European *rouget*, glanders and charbon. Of diseases peculiar to man, the infectious agents of the following have, with sufficient certainty, been determined: typhoid fever, diphtheria, cholera, tetanus, pneumonia, erysipelas; and I believe that we are warranted in adding malaria, though the latter is not due to bacteria, but to infusoria. The problem of tuberculosis has not been worked out in its entirety; there are still difficulties and contradictions which are hard to explain in accordance with the new etiology, yet on the whole the causal relation of Koch's bacillus to tubercle seems to have been sufficiently demonstrated.

The infinite variety and multitude of micro-organisms; their rôle in the phenomena of fermentation and putrefaction, and in the general break-up of organic life; the incen-

sant struggle of the cells of the living organism against the microbes, and especially against such as are pathogenic, are subjects on which it is not necessary for me to dwell. What is particularly worthy of note is, 1. Their extraordinary reproductive activity, and the possibility, under favorable conditions, of the anatomical elements being overcome and overwhelmed by them. 2. Certain pathogenic species penetrate the tissues, irritate and give rise to inflammations and morbid growths. 3. Where they find a congenial habitat, they, parasite-like, live at the expense of their host, appropriating oxygen and pabulum, and thus impoverishing the tissues. 4. They secrete or excrete certain poisonous principles—ptomaines, toxines, tox-albumens—to which the baneful effects of many of them are due. The habitat of the microbes may be all or any of the tissues and fluids, but ordinarily each pathogenic species has some favorite localization—(lungs, intestines, etc.)—some *locus minoris resistentiae* where it best thrives and multiplies.

Bacteriological therapeutics comprise such medicinal and hygienic means as directly antagonize the bacteria that cause the disease. The term is nearly synonymous with the term *antiseptics*, and is applicable to everything which is prejudicial to the life, multiplication and functions of the microbe, in doses which are safe for a man to take. This definition is, as Bouchard points out, a purely medical definition. The surgeon, acting only on limited surfaces, may sacrifice certain parts of the body attacked by the infectious agents. When, however, we come to the practice of general antisepsis, the problem is of a different nature, and this brings me to my second heading.

2. THE LIMITATIONS OF BACTERIOLOGICAL THERAPEUTICS IN INFECTIOUS DISEASES IN GENERAL.

If the views just stated are sound, then an infectious disease may be defined as "a conflict between the subject who is smitten and a particular micro-organism which multiplies at his expense, appropriates his air, water and pabulum, disintegrates his tissues, or poisons him by its secretions, or by the decompositions which accompany its development." Granting this definition (to which daily increasing knowledge lends support), the study of bacteria in general, and especially of the pathogenic bacteria, possesses a surpassing interest to every physician who looks for enlightenment and help from the new pathology; for it is

not too much to affirm that as the causes of disease are understood, the triumph of therapeutics becomes more easy of attainment.

It has long been the reproach of the medical profession that therapeutics is not an exact science. With a full knowledge of pathogenic germs and germicides that are available and safe, physicians may eventually feel that the reproach of the ages is no longer justifiable, at least with respect to the microphytic diseases. The art of the physician in presence of these diseases will consist in the observance of a few simple rules: What is the nature of the particular infectious disease, and is the causal agent, the parasite, known? Then all the recognized agents of the parasiticide medication will be called into use to prevent the development and multiplication of the microbe. What can be accomplished by intelligent and watchful prophylaxis to stay the spread of the infection must first be done, and human habitations and persons protected by suitable anti-septic means. In fact, it is from prophylaxis that the first, and, thus far, the principal, services have been realized, and sanitary science, surgery and obstetrics have derived incalculable benefits from bacteriology, despite the fact that this science is yet in its infancy.

As for the unfortunate victims of microbic invasion, the problem of the therapist presents this difficulty: How best to destroy the parasite and not injure the patient? He may not be able to apply his germicides in quite as unstinted a manner to the living human organism as he would to infected barracks or emigrant ships; but this leading indication he will ever have in view—namely, to render the human environment of the morbidiferous microbes as uncomfortable as possible, and to weaken and limit their powers of growth and multiplication. In short, when once the cause is ascertained, there can be but one leading indication—namely, to destroy the pathogenic agent, or attenuate as far as possible its influence on the economy. The resources of the physician will be enhanced by the practical discoveries of the chemist and microbiologist; and experimental physiology will effect for all rival systems of medication “provings” which can not be gainsaid, because of their strictly objective character.

Bacteriological therapeutics comprehends such chemical substances as are offensive and destructive to microbes in general, and certain pathogenic microbes in particular.

Possibilities in this direction are limited by the ability of the living cells of the organism to tolerate the bactericide agent. This is, and always must be, the principal limitation. It is true that much hope is expressed by some enthusiasts that just as $\frac{1}{150000}$ of nitrate of silver will destroy a culture of *aspergillus niger*, so for each pathogenic bacterium some specific, harmless or nearly so to the animal cells, while fatal to the parasite, will yet be discovered. I am inclined to believe that such hope will always be like the "purification of our politics," "an iridescent dream." Nor do we yet know enough about the *modus operandi* and the real value of the immunity obtained by "protective inoculations" (whether of the microbes themselves or the chemical products elaborated by them) to pronounce definitely as to the future of this mode of treatment. I have lately found the farmers of Nebraska full of faith in Dr. Frank Billings' protective inoculations against hog cholera. Billings inoculates healthy animals with a pure culture of the very microbes that induce the disease, only selecting mild cases from which to obtain the material for his cultures. I have myself (it seems to me) witnessed the triumph of this method of protection. On the other hand, Pasteur's anthracoid vaccinations have not been a complete success, and always there seems to be an unknown factor of danger, as has repeatedly been illustrated in the mortality which has attended vaccinations against *rouget* and *charbon* in different parts of Europe.

It is not necessary that I should do more than remind this audience of the sanguine expectations and enthusiasm which were lately awakened by Koch's tuberculin, and the miserable disappointment which followed. Nevertheless, I believe that these "bactericide toxines" and "defensive proteids" are destined to play a large part in the therapeutics of the future. They, in fact, come very near to the realization of what therapeutists are looking for, being substances which, elaborated by the microbes, or, as some say, the animal cells, are destructive to the microbes while being inoffensive to the cells of the organism. So that, possibly, our progress in this department of bacteriological therapeutics is limited only by our ignorance.

3. THE LIMITATIONS OF BACTERIOLOGICAL THERAPEUTICS IN RESPECT TO TUBERCULOSIS OF THE LUNGS.

The limitations of bacteriological therapeutics are often due to the fact that the culture soil—the environment,

not the microbe—is the principal factor. This is especially the case with tuberculosis. And this naturally introduces the third topic of this paper. For a time subsequent to Koch's discovery of the bacillary origin of tuberculosis, the special attention of experimental therapeutists was directed to the various antiseptic methods which, one after the other, were vaunted as efficacious against the bacillus. Inhalations took a prominent place: sulphurous acid, creosote, chloroform, carbolic acid, compressed air, ethyl iodide, terebene, eucalyptus, turpentine, benzoin, hydrofluoric acid, have all had their advocates and their day. Bergeon's gaseous rectal injections of hydrogen sulphide were given with the same intent; it was believed that the gas which was introduced by the rectum would be eliminated by the pulmonary mucosa, favorably modifying the latter against the bacilli, if not actually destroying the germs *in situ*.

It must be acknowledged that the results of germicide treatment (and under this title must be included the hot-air-respiration cure of phthisis) have not been what was hoped. As patients sometimes temporarily improve under any kind of treatment, so some consumptives did get better after subjection to the fumes of burning sulphur and after the fluorhydric inhalations; the success of this medication was not, however, sufficiently satisfactory. Certainly laboratory experiments, such as those of Jaccoud, Grancher and Chantard, have proved that the action of the vapors of fluorhydric acid on the evolution of experimental tuberculosis is *nil*.

The same may, I believe, be said of sulphurous acid vapors in such dilution as can be tolerated.

It is needless to say that there is no medicament yet known which, introduced by the mouth or subcutaneously, can by any direct bactericide power in the least arrest the development of either experimental or spontaneous tuberculosis.

Nor can we hope for much good from the introduction of any microbicide toxine, such as may be found to oppose the development of cultures of the bacillus tuberculosis *in vitro* or arrest the progress of experimental tuberculosis. Phthisis is too predominantly a question of soil (*terrain*) rather than of a specific bacillus. Unlike syphilis, the virus of which is capable of undergoing evolution in any soil, the micro-organism of tuberculosis does not attack all persons.

it selects its subjects. "The individual who finds himself in a fairly normal condition of organic equilibrium resists with success, and burns the bacillus when the latter penetrates his air passages. For this reason tuberculosis is the least contagious of all the microbe diseases. In short, the question of soil is primordial and fundamental; it occupies the first place in prophylaxis and treatment." And no therapist can do good work in combating phthisis who does not start from this datum.

Some (as Cazeaux and Dujardin-Beaumetz) have advised that on all suitable occasions the windows of sleeping-rooms should be left open at night. It has been remarked that a patient will tolerate in a horizontal position, and consequently in bed, temperatures which seem severe when one is sitting or standing. At the same time, physicians can not be too much cautioned against sending to elevated stations patients with advanced lesions and with fever.

The medical treatment, while not to be neglected, is only of secondary importance; nevertheless, under the use of the classic remedies—cod-liver oil, malt extracts, arsenic, creosote, tannin, hypophosphites, alcohol, cinchona, and nuxvomica—one will often witness an augmentation of weight and favorable modifications in the local signs. As adjuvants, inhalations, now no longer relied on as curative, may produce some amelioration. In early phthisis there is much hope in climatotherapy, and this is unfortunately the principal hope.

Such are the principles of treatment which have given me what little success I have ever had, in a practice extending over more than a quarter of a century. Knowing that tuberculosis is simply a *blight* which smites imperfectly nourished tissues, I would urge that the efforts of the therapist be directed to the element of cellular weakness rather than of chasing the will-o'-the-wisp of a bacillus. Evict one hungry brood, and another more voracious and more malignant will take its place.

If it should be argued that all these hygienic means and all medicinal means designed to fortify the organism and save it from the depredations of bacteria are properly *bacteriological*, the reply is that they are only indirectly, not primarily, so.

What would be the result of living in complete isolation from all bacteria (if that were possible) I can not conjecture,

so important are these "infinitely little" organisms in all the phenomena of life, death and disease.

"Partout la vie est dans la vie
Et partout la vie devore la vie."

Doubtless if the phthisically predisposed could pass their lives in altitudes never invaded by the specific bacillus, many of them might have immunity from tuberculous disease, for the same climate that is fatal to the microbes fortifies the lungs and the constitution. But what shall we say of those who have derived from parental blood the very germs of the disease which remain latent in the organism till the time shall have come when the pulmonary or other tissues, smitten from birth in their vitality, become fit spoil for the parasitic foe? That there are multitudes of such cases which, by the hard conditions of their being, are destined early to succumb; men and women that are weighed down by an hereditary curse which no fortifying environment can ever remove; that the inception of the disease means to them death; that no treatment—hygienic, bactericidal, medicinal—can do much even to ameliorate their condition; that such patients, whether belonging to the higher or lower classes, are and must for generations be the despair of the physician—these are facts of which we are all too painfully cognizant. But this is tantamount to affirming the limitations of all therapeutic means in grave tuberculous disease, owing to a fundamental, irremediable lack of vital resistance and vital endurance.—*Therapeutic Gazette.*

Treatment of Gall-Stones.

According to Naunyn, *Centralblatt für klin. Medicin.*, about every tenth adult suffers from gall-stones. The disease is extremely chronic and painful. Latterly surgical interference has been resorted to, but there still remains much for the physician to do. It is necessary first to understand the mode of origin. Gall-stones are formed if the bile is laden with the ingredients that form them, and which are very soluble, namely, cholesterin and billirubin-chalk. The cause of the increase of this in the bile is disputed. One view states that the excretion of cholesterin and of chalk is too great—cholesterin because of anomalous metabolism, chalk because of too much chalk being in the food. The other view is that the bile has lost its power of dissolving

these bodies. Cholesterin forms two per cent. of the solid ingredients of the bile, and this proportion is fairly constant, independent of disease or food, and also of the amount present in the blood. There is an increase, however, where there is catarrh of the bile passages. Chalk also is formed from the diseased mucous membrane, the amount otherwise being independent of the quantity taken with the food. Naunyn holds that it is untenable to look for the formation of gall-stones in decomposition of the bile. Physiological considerations have afforded no help in accounting for the formation of gall-stones. The frequency of the occurrence can only be based upon post-mortem examination. The percentage found after death varies from five to twelve per cent. with different competent observers. The difference of these observations are probably due to the fact that the gall-stones are easily overlooked. From all statistics three very important deductions can be made: (1) Gall-stones are four-and-a-half times more frequent in women than in men. (2) Before thirty they are infrequent (two to three per cent. Schröder), after that age they become more frequent—ten per cent. In old age their frequency becomes strikingly increased—twenty-five per cent. over sixty years of age. (3) Women that have borne children are most frequently affected of all. Thus Schröder found that among women with gall-stones ninety per cent. had borne children. It must therefore be concluded that the most distinct cause is the stagnation of the bile in its passages. In women this is favored by clothing and pregnancy, both of which retard those movements of the diaphragm that assist in the expulsion of the bile. The frequency of gall-stones in old age is due to retardation of the bile flow, through atrophy of the smooth muscles in the bile passage (Charcot). The stagnation produces disease of the mucous membranes of the passages, and the cholesterin and bilirubin-chalk arise in consequence of destruction of the epithelium. At first an amorphous deposit is formed, which by absorption of the fluid becomes granular. These granules increase by deposition of bilirubin-chalk, and the infiltration of cholesterin. The latter, supplanting the bilirubin-chalk, forms ultimately the beautiful pure white cholesterin-solitaire. A further secondary formation occurs in the deposition of carbonate of lime, of importance because the stone is then no longer soluble. The cause of the stone forming desquamative angio-cholitis is the retarded

discharge of the bile, through which an infection of the bile passage is favored. It is also possible that the bacillus growth in the bile favors the formation of gall-stones. Probably it is in this manner that the intra-hepatic stones are formed. In regard to symptoms there should be distinguished a regular form and an irregular form of the disease. The former occurs when there is simply lodgment of the calculus in the gall-bladder or passage of the stone along the duct. The irregular form is seen when there is infectious angio-cholitis with abscesses in the liver, fistula, and all other consequences. As a final issue of the regular gall-stone disease may be the formation of carcinoma in the biliary passages and the liver. In regard to the symptoms, it should be remembered that the stone is most often lodged in the cystic duct, giving rise to colic, and less often in the common bile duct; therefore the occurrence of jaundice is not so common. Further, it should be borne in mind the ease with which infection can arise, giving rise to biliary fever. The connection between gall-stone and food is not proven, so that it is not possible to recommend a prophylactic diet. For the removal of gall-stones, cholagogues are not to be depended on. After an abundant varied diet the bile flows more freely than after cholagogues. In practice, errors of diet should be avoided, and alkaline saline waters (particularly the hot Karlsbad) act beneficially. These act by increasing the peristaltic activity of the digestive tract, and increasing the flow of blood to the abdominal organs. In the peristalsis the bile passages participate, and the movement of the bowels acts as a form of massage, while the diseased mucous membrane benefits by the increased flow of blood. The injection into the rectum of large quantities of hot water serves the same purpose.

Fürbinger based his remarks on sixty-four cases he had carefully observed, so that there was no doubt of the diagnoses. Of these, thirteen were men and fifty-one women. The chief site of pain did not lie in most of the cases in the right hypochondrium, but in the epigastrium, radiating from thence upwards and downwards. With jaundice there was enlargement of the liver, and the dilated gall-bladder was not infrequently to be felt. In twenty-four out of forty-one there was slight fever; considerable slowing of the pulse can accompany the fever. In thirty out of forty-one there was jaundice. Duration of attack showed a variation from transient to several days' duration, with intervals

of weeks and years. The *corpus delicti* should always be looked for, and its absence does not vitiate the diagnosis. Very seldom was the stone perceived through a peculiar grating noise in the gall-bladder. When there is fever, it is irregular and accompanied by other symptoms pointing to the liver. When protracted for weeks and months the victim declines with severe cachexia (liver phthisis). The local pain may not be excessive till there is inflammation and ulceration of the peritoneum, on account of the latency of the catarrh of the gall-bladder and biliary passages. In suppurative inflammation of the liver, pain in the right hypochondrium and jaundice are frequently wanting. When perforation takes place into the peritoneal cavity a fatal peritonitis is set up by the decomposed bile. When a fistula is formed it is often very distant, and daily discharges quantities of the bile and rarely gall-stones. Most frequently the perforation takes place into the small intestine. The gall-stone can here cause grave mischief (ileus, perityphlitis, etc.). Finally there may be set up interstitial hepatitis (too frequently doubted), as well as adhesions between the liver and neighboring organs. The latter may be a source of great discomfort. In regard to the diagnosis, gall-stone disease was often mistaken for gastric ulcer, cramp of the bowel and stomach, renal colic, and hepatic neuralgia. Further, the pain may lie in any region of the abdomen save that of the liver. Slight jaundice is not easy to recognize, but is valuable when it does occur. Surgical interference should not be delayed too long in order to aid the diagnosis. The puncture of the gall-bladder is dangerous. Care should be taken not to confuse the intermittent fever with malaria or typhus. In regard to prognosis of the attack it is favorable, but of the after condition rather grave, although the surgical methods have improved it. It is consoling to know that serious cases can obtain ultimate recovery by internal treatment. Of Fürbinger's cases thirty-four per cent. were cured, forty-two per cent. were improved, ten per cent. were unsuccessful, and fourteen per cent. died. Of the six treated by surgical means, four recovered. In regard to treatment, it is necessary to prevent the formation, to remove the concretions, and to combat the tendency to the formation of gall-stones. Morphia and opium are the best agents for subduing the attacks of colic. It is folly to try to dissolve the stone. The endeavor must be made to increase the mechanical driving force of the bile

and swell out the stone. Health resorts and springs have much success and not a few failures. The salicylate of soda and the oil cure have been useful in Fürbinger's hands. With the latter the liver becomes permeated with fat, and a saponified fat is formed which can be found in the stools as pseudo gall-stone. While this treatment can often be borne, it sometimes gives rise to distressing dyspepsia. In regard to diet, more depends on temperance than on the choice or denial of certain foods. There is no value in theoretic or empiric reasoning, and there should only be excluded excessive fatty and sugary foods, alcohol of bad quality, and notoriously indigestible matters. Of high value are warm baths, rational clothing, dwelling in fresh air, and avoidance of over-exertion. Fürbinger can not praise the attempts to express the stone by kneading the gall-bladder and pressing the liver. Notwithstanding the brilliant results of surgical practice, he thinks that the operative procedure should not be lightly undertaken. Still, when all other means fail, and the patient is threatened with cholæmia and pyæmia, then he would advise surgical interference. The operative removal of cicatricial bands is often valuable.

Reidel gave his experience of thirty-two cases. Sixteen of these had not jaundice, on whom he operated. All recovered, and no fistula was left behind. Sixteen had jaundice and the result was not so satisfactory. Ten completely recovered, two were under treatment, and four died. Of these four, one died after complete extirpation of the gall-bladder, two were in an exhausted condition when they came under treatment, and one died in consequence of escape of bile into the peritoneal cavity.—*Med. and Surg. Reporter.*

The Action of Chloral Hydrate on the Kidneys.

Since the publication of Liebreich's monograph on chloral there has been no study of the action of this remedy on the kidneys sufficient to explain results which had been sometimes noted to follow the use of this valuable hypnotic. Dr. Cavazzini has, however, recently made some experiments in this connection on dogs and guinea-pigs, and he has found that when injected into the abdominal cavity, chloral hydrate produces marked irritation of the secreting cells of the kidneys. Even after the first injection it causes visible granular degeneration of the epithelium of the convoluted tubules,

while after prolonged administration the epithelium of all renal tubules undergo degeneration, with the single exception of the straight tubes.

In more severe cases it produces swelling of all the renal epithelium, with other symptoms of acute parenchymatous nephritis, although the Malpighian glomeruli are never affected, nor is there ever any implication of the interstitial connective tissue.

The intensity of this destructive process depends partly upon the duration of the poisoning, partly also upon the individual's susceptibility. If the remedy is introduced through the stomach, it may likewise produce degenerative changes, but not to as marked a degree or as rapidly as when it is injected into the peritoneal cavity. The lesions thus described of the renal tissue are stated by the author to disappear after suspension of the use of this drug. Nevertheless the author states that in none of the cases in which the post-mortem examination proved this condition to be present, did he ever during life succeed in detecting any albuminuria, a fact which will perhaps explain the great scarcity of clinical observation pointing to the danger of chloral from its action on the kidneys. The author's observations, however, show that the kidneys are liable to marked disorganization from the action of chloral, and should serve to indicate the necessity for great caution in the employment of chloral in cases where the kidneys are already affected.—*Deutsche Medizinal Zeitung*.—*Therapeutic Gazette*.

Various Forms of Hysterical or Functional Paralysis.

In the *Lancet* of October 17, 1891, is a lecture by Prof. H. Charlton Bastian on the above subject. Under the heading of "Cases Due to Defective Functional Activity in the Posterior Third of the Hinder Segment of the Internal Capsule," he makes the following remarks which we feel sure will be read with interest by the readers of the MEDICAL NEWS:

"It has now been conclusively proved by clinical as well as experimental evidence that what is known as 'cerebral hemianæsthesia' is caused by lesions of the posterior third of the hinder segment of the internal capsule; viz.: that part of the foot of the corona radiata which lies between the optic thalamus and the posterior part of the lenticular nucleus.

This part of the brain is supplied with blood by the lenticulo-optic branches of the middle cerebral artery. Hemorrhages and softenings are the common organic lesions occurring in this situation. It has now been equally well established, however, that a condition in every way similar, except that it is apt to be fluctuating in its severity and altogether irregular in its duration, is met with at times, in girls and women more especially, though occasionally also in men, as a result of mere functional disturbance, presumably in the region above mentioned, though independently of all discoverable lesion—that is, none has been discovered in cases in which there has been an opportunity for making such an examination. Variations naturally exist as to the completeness and the degree of hemianæsthesia of the head, trunk and limbs, when the condition is due to an organic lesion; but precisely similar variations are often met with when the condition is of functional origin. Thus it is not in all cases of either category that the special senses are involved; and in other cases, instead of the defect of sensibility occupying the whole of one-half of the body, it may stop short altogether about the head and neck. Again, frequent variations occur in the degree or depth of the hemianæsthesia; in some cases this loss of sensibility is limited to the skin and mucous membranes, while in others it involves also the deeper structures of the limb, so that all its parts are entirely deprived of sensibility. In this latter class of cases there is always a complete absence of muscular sense and of kinæsthetic impressions generally. Even in these extreme cases, however, there is no motor paralysis so long as the disease is limited to the region of the posterior third of the internal capsule. But when the eyes are closed in such cases, there is great uncertainty and lack of precision about the movements performed by the affected parts. We have to do, in fact, with sensory paralysis, no motor paralysis, and only a certain amount of ataxy when the eyes are closed.

“CASES DUE TO AN ASSOCIATED DEFECTIVE FUNCTIONAL ACTIVITY IN THE SENSORY SEGMENT OF THE INTERNAL CAPSULE AND IN THE CORTEX.

“It seems often to happen that functional disease is not strictly limited to this sensory region of the internal capsule; the defective nutrition, whatever its precise nature, seems apt to involve it and, simultaneously, portions of the

Rolandic area of the cortex constituting the termini for the afferent channels conveying kinæsthetic impressions; and when this extension exists, a motor paralysis of the corresponding parts becomes established. As with the simple affections of the posterior part of the internal capsule, so with these associated affections of the internal capsule and cortex; they are apt to occur with different degrees of intensity. One result of this is the production of two categories of paralytic disability. There are, in fact, on record (1) several instances of a very extraordinary grouping of symptoms, cases in which there is a complete or partial hemianæsthesia, associated with a motor paralysis only so long as the eyes are closed or the part to be moved is not seen; while there are a very much larger number of recorded cases (2) in which, with a similar complete or partial hemianæsthesia, there is the association of a motor paralysis, existing as much when the eyes are open as when they are closed. A few words must now be said concerning each of these combinations.

“1. *Hemianæsthesia with paralysis only when eyes are closed.*—So far as I know, Duchenne was the first person to call attention to this remarkable affection. After speaking of the much more frequently occurring cases of hemianæsthesia in which loss of muscular sense exists apart from paralysis of the limbs affected, he goes on to speak of another category of cases in the following terms: ‘In the second category, which is much less numerous, the patients when similarly deprived of sight lose the faculty of executing the simplest voluntary movement. If they are bidden, for example, to open or shut the hand, flex or extend the forearm—in a word, whatever movement one asks them to perform—the muscles which ought to enter into contraction remain inert, notwithstanding all the efforts of the will. One only observes sometimes certain irregular movements, slight in extent, weak, and different in kind from those that they wish to execute—movements of which they have even no knowledge. Nothing can describe their astonishment when they perceive after the experiment that their limb has remained in the same situation when they thought they had made it execute a movement. Their surprise is all the more great, since they can execute the same movement with rapidity the instant that they are permitted to look at the limb.’ In confirmation of these statements, Duchenne gives a detailed account of a patient in the Charité under the care

of Briquet, whom they conjointly submitted to repeated careful examinations. The description given by Duchenne of this remarkable case was subsequently entirely confirmed by Briquet. He, moreover, gives the details of another case just as extraordinary, this patient having been under his care in the same hospital for nearly twelve months. In both cases double hemianæsthesia existed; but another case has been recorded by Bazire, in which similar remarkable phenomena occurred in a man who was suffering from hemianæsthesia only. Speaking of these strange cases before the Neurological Society in 1886 I gave the only explanation that I have yet seen of them in these terms: 'It seems to me that we here have to do with functional defects in the cortical termini for muscular sense impressions, as well as interference with the functional integrity of the afferent channels for such impressions. These latter are alone affected (in concert with the afferent channels for other sense impressions) in the more ordinary severe cases of hemianæsthesia of the type recorded by Demaux. But in these altogether extraordinary cases of Duchenne and Briquet there existed, I think, in addition a low functional activity of the muscular sense centers; that is to say, these centers could not be roused into activity by comparatively weak associational stimuli (as during volition with eyes closed), though they were able to respond under the influence of a stronger stimulus from the visual center. May we not have in certain hysterical paralysis of cerebral type a still greater functional degradation of these muscular sense centers? Such patients do not move the affected limb or limbs either when their eyes are open or closed.' I still know of no other way in which such peculiar combinations of symptoms are to be accounted for. And we may find illustrative, though not exactly parallel, conditions among speech defects of an amnesic type, due to a lowered functional condition of the auditory center. When this center, for instance, can not be roused into proper activity by ordinary associational stimuli, the patient, as a consequence, can not mentally recall the words he wishes; and, as a further consequence, can not utter such words. This is a temporary paralysis so far as these speech movements are concerned, although due to a sensory defect. On the other hand, such a patient may be able to repeat at once words uttered before him by another person. The affected auditory center in this case reacts to the

stronger stimulus; just as I imagine the affected kinæsthetic centers reacted in the cases of Duchenne, Briquet and Bazire, under the influence of stronger associational stimuli (when the eyes are open) coming from the visual centers. Speech takes place under the influence of sensory stimuli proceeding from auditory and glosso kinæsthetic centers; and a marked defect in either of these sensory centers will lead to paralysis of speech movements, either temporary or permanent according to the nature of the defect. Similarly, limb movements take place under the influence of sensory stimuli proceeding from visual and kinæsthetic centers; and a marked defect in the latter sensory centers will lead to paralysis of corresponding limb movements, either temporary or permanent according to the nature of the defect in question. At present, however, we know nothing of a paralysis of limb movements primarily and directly occasioned by some defect in the visual center comparable to the paralysis of speech movements above referred to as resulting from a lesion in the auditory center. Possibly defects so occasioned may be recognized in the future.

"2. Hemianæsthesia with paralysis when eyes are open or closed.—This combination is by no means uncommon, though individual cases vary much in regard to the amount or kind of co-existing motor paralysis. Thus in some cases the paralysis assumes a hemiplegic, and in others a paraplegic, type, while more frequently still it occurs in the form of a monoplegia, either brachial or crural. In these cases the lack of sensibility, so far as the limbs are concerned, is distributed in accordance with the motor paralysis, and is always found to include a distinct insensibility to kinæsthetic impressions. The cases that assume a paraplegic type are to be regarded as partial double hemianæsthesias with paralysis, while the monoplegias are to be regarded as partial single hemianæsthesias with paralysis. Curiously enough, however, it happens that even in the more perfect hemiplegic form of paralysis we almost never get a complete hemiplegia, since paralysis of the face and tongue is almost always absent when the paralysis is of functional type. This was long ago pointed out by Todd, and has been abundantly verified since by subsequent observers. As to the cause of the peculiarity, nothing is known."

Santal oil is now given in small doses on sugar to control the cough of consumptives.

Translations

Medical Therapeutics.

On Hypodermic Medication.

BY DR. PERRON (OF BORDEAUX).

Translated for the CINCINNATI MEDICAL NEWS from the *Bulletin General de Therapeutique*, Paris, July 30, 1891, by Mon. E. A. Quetin, Juge de Paix, Tonnerre, France.

It is with reason that we now look with an attention quite new, quite special, upon the method of introducing, through the skin, into the organism, the agent destined to fight the antibacillary battle. In order to pursue the wished-for result, with all the chances of success, it would be of a primary importance to have a way of using easily creasote, a substance to which practitioners are returning, after granting, without sufficient motives, a particular credit to *gäiäcol*.

About eighteen months ago, at the moment when *gäiäcol* was held in high repute, we said that the virtues of that substance were in nowise proved by facts; that creasote, being an integral *ensemble* of several elements endowed each with its share of activity, must offer more guaranty than *gäiäcol* alone. So, we are now beginning to notice that this last substance not only does not possess any exceptionally favorable properties, but, moreover, that it produces general phenomena of congestion and of evidently dangerous excitation. Prof. Dujardin-Beaumetz, who made those observations, estimates that the symptoms caused by *gäiäcol* are analogous to certain effects of the lymph of Koch. It is therefore with good motives we decide returning to creasote, whose action is sure, energetic and safe. But the chief difficulty consists in bringing this precious antiseptic to a proper shape. Heretofore, creasoted hypodermic injections had for excipient olive and sweet almond oils, which dissolve easily the medicament. The experiences of MM. Gimbert and Burlureaux go to prove that quantities relatively considerable of creasoted oil can be injected without any accident. Gimbert has used solutions containing 1 per 15 of creasote. Burlureaux used a more concentrated solution—1 per 5 and even 1 per 3. With this method they were able to introduce into the organism of

tuberculous subjects a very strong daily dose of creosote. The curative effects they obtained are remarkable; M. Bureaux especially obtained brilliant and decisive results, showing the superiority of his mode of treatment.

However, it results from our personal observations that if such injections are not followed by immediate inconveniences, they nevertheless bring after them certain local consequences which may interfere with the vulgarization of the hypodermic practice. Among those consequences there is one to be particularly noted; the injected regions undergo, in fact, modifications inducing a very notable sclerosis of the tissues. Even after a long repose, the parts injected do not return to their primitive state, and it is no longer possible to make there new injections with the same chances of absorption as before. That sclerous transformation which, among certain subjects, is more active than with others, results from a real process of cicatrization bearing upon the skin and the subjacent cellular layer; it depends on several influences, first the causticity of the injected substance. The tendency of experimentalists has been of always increasing the concentration of their solutions, with a consequent irritating action and a degree of sclerosis proportionate to the causticity of the injection. Besides, the oily excipient was never absorbed entirely at once, even in a new region; it is in some way filtered through the surrounding cellular tissue, and there remains a residue then acting as a foreign body that disappears but very slowly. We should remark, also, that the irritation due to concentrated solutions is contributing to render the absorption more difficult, because any irritated tissue becomes less apt to be impregnated. Lastly, injections are hurried too much; this separates the skin from the cellular tissue, lacerates the latter and necessitates the complication of a reparative action. All these united causes determine at first some inflammation, and then successive degrees of sclerosis, according to the more or less frequent repetition of the injections in the same points. The remedy to those inconveniences is indicated by their very nature.

Instead of trying to concentrate the solutions, we should dilute them as much as possible, though injecting enough vehicle to insure the absorption of the same dose of creosote. We must, moreover, administer the injections with an extreme slowness by means of a syringe provided with a screw valve piston (*à pas de vis*), and proceed so as to ex-

ceed but very little the normal arterial pressure. In taking the precautions indicated we avoid the damages and alterations ordinarily consequent to precipitate injections which leave under the raised skin a real lump of medicamental liquid. We are now arriving at the principal point of the question—at the necessity of finding an excipient powerfully favoring the diffusion and absorption in the tissues, and which, as a consequence, would allow diminishing the concentration of the creosoted solutions. The oils employed up to this day are of a vegetable nature, and, according to us, less absorbable than the fatty substances of animal origin. Experience proves that in rubbing the skin with various fatty substances, those of the animal nature are best absorbed. Therefore if we employed, as excipient of creosote, an animal oil, it would be possible to increase the absorption of the medicament, and consequently to use more dilute (weaker) solutions. That is what we have tried to realize in using ox feet oil, refined through a particular means, and then sterilized. Our formula is as follows:

Beech Creosote, 5 grammes.

Ox Feet Oil (Pure Sterilized), 95 cubic centimetres.

We thus obtain a preparation clear, fluid, limpid, light and more absorbable than those whose vehicle is a vegetable oil. We resume as follows our propositions concerning the creosoted medication: 1. Use solutions as diluted as possible; 2. Dissolve the creosote in oil of animal origin, the ox feet oil, purified, sterilized; 3. Make the injections very slowly, using a syringe with revolving piston. Practitioners do not agree as to the choice of the region where the punctures should be made. Some prefer the legs, others the arms, the side of the thorax, the supra-spinata fossa. We believe that the spot most favorable, not only for the facility of the punctures, but also for the absorption of the injected liquid, will always be the one offering most subjacent celluloadipose tissue. After numerous trials we give the preference to the external iliaco-supra-trochanterian region.

[From the *Bulletin General de Therapeutique*, Paris, October 15, 1891.]

CONTRIBUTION TO THE STUDY OF THE TREATMENT OF DIPHTHERIA, BY P. KASTENKO AND F. GRABOVSKI (WRATCH, NO. 20, 1891).

Under the inspiration of the director of the Bacteriologic Institute of Karkoff, Prof. Wissokovitch, the authors under-

took to verify upon animals the facts brought forward by Dr. Babchinsky on the favorable effects of erysipelas and of the streptococcus of erysipelas in diphtheria. . . . They have made on rabbits inoculations with pure cultures of streptococcus of erysipelas. The result has been disastrous. The rabbits so inoculated were dying more rapidly with diphtheria than the witnesses which were not inoculated of erysipelas. This confirms, anyhow, the facts asserted by Roux and Yersin, that erysipelas aggravates diphtheria.

Microscopy.

The Microscopical Examination of Seminal Stains on Cloth.

BY F. M. HAMLIN, M.D., AUBURN, N. Y.

Having occasion last January to examine some seminal stains on cloth, I sought to avail myself of the experience of others. I found that all writers on medical jurisprudence and microscopy, including such names as those of Taylor, Beck, Beale and Frey, to whom I had ready access, adopt and recommend the method of Dr. Koblanck, of Berlin, published in 1853.

"It is briefly as follows: Cut out the portion of cloth suspected. Place it in a watch glass with a few drops of distilled water; let it soak for a few minutes (variously stated from two to ten); stir it about with a glass rod, and then squeeze out the water with the fingers. This squeezing may be done directly upon the slide or into the watch glass, whence a portion may be taken up by a pipette and transferred to a slide.

"Following this plan with a piece of cloth known to be stained with semen, I obtained such poor results that I resolved to try some other method. Remembering how transparent a fine linen fabric appeared on a certain occasion when I was studying its fiber, I resolved to subject a portion of the cloth itself at once to the microscope. Taking a small piece of the linen and placing it upon a drop of water on a slide, I let it soak for awhile, then put on a cover-glass and proceeded to examine it. Almost immediately

I discovered a number of spermatozoa clinging to the fibers of the linen or lying in masses in the meshes. Encouraged by this success, I experimented with fabrics other than linen. In light-colored silk the spermatozoa were detected quite as easily as in linen. A firm piece of cotton sheeting proved refractory, till I thought to unravel or fray out the ends, when I readily found the zoosperms adherent to the detached fibers.

"Having experimented with the fabrics commonly used for undergarments, I turned my attention to colored woolen goods. These were not, of course, sufficiently transparent to render the above plan practicable; so, with a keen scalpel, I shaved off a portion of the stained surface, which fell in a fine dust upon the slide. This was moistened, and after soaking awhile was examined. The spermatozoa were found even more readily than in the other experiments. The superiority of this method over that recommended in the books is shown by contrasting results. A piece of linen, known to be stained with semen, was most carefully treated according to Koblanck's method, and a drop of the deposit examined. Over an hour's careful and patient search was rewarded with a view of just one whole spermatozoon. But on taking a small piece of the cloth, a portion of which had been experimented on as above, and placing it under the microscope, I found within two minutes several perfect specimens.

"Dr. Koblanck contends that if spermatozoa are not found by his process, it may be asserted the stains are not seminal. I not only dissent from this, but I believe that his manipulations actually destroy spermatozoa when present, not all, perhaps, but to such an extent as to make uncertain their discovery. This statement is based upon the following facts: Semen deposited upon any surface dries in semi-transparent masses or scale. It seems impossible by redissolving these to obtain the spermatozoa intact. In the process of resolution they disintegrate and are lost, or at best but a few heads remain. To use a homely illustration, the string around which rock candy has crystalized may be recovered intact when the candy is dissolved away; but the delicate and friable spermatozoa break down and disappear with the substance which incrusts them.

"Out of the thousands which must have been deposited upon the piece of linen treated by Koblanck's method, I could find only one spermatozoon I would have ventured to

swear to in a court of justice. This same piece was examined under the microscope, and only a very few were found which had not been removed by the washing. But on another piece, taken from the same stain, and submitted at once to the microscope, they were found in quantities. If not destroyed by Koblanck's method, they should have been found either in the deposit from the washings, or upon the cloth itself.

"This view is supported by the following experiments:

1. The sides of a glass vessel were smeared with semen. When this was thoroughly dried, the glass was filled with water and allowed to stand for ten hours. Portions of the semen were seen to separate in thin films and sink to the bottom. Examination of this deposit detected only a very few free spermatozoa, and in the films many of the spermatozoa were sharply defined, but the vast majority of the latter seemed to be disintegrating, and the field was filled, outside of the boundaries of the films, with highly refractive bodies which I *thought* might be fragments of the heads of the spermatozoa, but of this I was not certain. They were irregular in outline, and were not oil globules. 2. As is well known, semen when first emitted is quite thick and gelatinous, but soon becomes much more liquid. Some that had become thus liquified was placed upon a slide and permitted to flow about, drying in some places in a film of extreme tenuity, and elsewhere in thicker layers. These thicker portions contracted in drying, and scales became detached from the glass. When subjected to water under the cover-glass, these scales behaved in all respects like the films from the sides of the glass vessel in the experiment related above, but over the exceedingly thin portions many of the spermatozoa were found free and floating about.

"From these experiments it seems reasonable to conclude that when semen dries *en masse* and is then subjected to the solvent action of water, the integrity of the spermatozoa is quite generally destroyed, and that those found free and whole are such as dried with little or none of the muco-albuminous fluid of the semen about them.

"When semen from urine is allowed to dry upon cloth, these scales, or dried masses, are not often seen, for the muco-albuminous fluid has been very greatly diluted. The spermatozoa are not so numerous, also, but are generally found more easily, for they adhere less closely to the fibers.

"Hence Koblanck's method, with its soakings and manip-

ulations, tends to destroy so many of the spermatozoa as to lessen greatly the certainty of finding them, and even, I have reason to believe, has occasionally frustrated the ends of justice.

"I, therefore, recommend the following procedures:

"1. If the stain to be examined is upon any thin cotton, linen, silk or woollen fabric, cut out a piece about one-eighth inch square, lay it upon a slide previously moistened with a drop of water, and let it soak for half an hour or so, renewing the water from time to time as it evaporates. Then with a pair of needles unravel or fray out the threads at the corners, put on the glass cover, press it down firmly, and submit to the microscope.

"2. If the fabric is of such a thickness or nature that it can not be examined as above, fold it through the center of the stain, and with a sharp knife shave off the projecting edge thus made, catching upon a slide moistened with water the particles removed. After soaking a few minutes—say five to ten—the powdery mass will sink down through the water and rest upon the slide. The cover-glass may now be put on and the preparation examined.

"The latter plan serves as well for hairs, but great caution must be observed in cutting them lest the portions bearing the suspected deposit fly away and are lost.

"Whichever plan be appropriate, it is best first to moisten the slide with a drop of water. In the former case, by laying the cloth upon the water we get rid most easily of the air bubbles, and in the latter the water preserves the powdery portions cut off from being lost, and they are not rolled to one side, as when the drop of water is subsequently applied.

"Should it be desired to preserve any of these preparations for production and examination in court, I have found that to hold down the cover-glass with a spring clip, and run around it a circle of liquid marine glue, serves at least a temporary purpose.

"A piece of stained muslin lay nearly two months without protection upon my working-table. I then mounted a portion of it in water, as above described. It now, at the end of five months, shows the spermatozoa as well as ever. For permanent mounting I should suppose the addition of carbolic acid, chloral hydrate, or some such preservative, would be of service. I have not found it necessary to use

any dye or any solvent except water. A power of three hundred diameters is amply sufficient for these examinations.

"Concerning the durability of spermatozoa, Ritter asserts that he has discovered them after a period of four years. To show how, when dried, they will bear rough handling, I may add that I rolled and twisted between my fingers a stained piece of muslin till it was in the form of a string, unrolled and twisted it over again two or three times, using much force; and was yet able by my method to discover spermatozoa without much difficulty.

"I have sought to put this matter upon such a footing as to enable the medical witness to testify positively in court as to whether a certain stain is or is not seminal.

"I claim for my plan extreme simplicity, ease of execution, and the greatest degree of certainty, for piece after piece of the stained fabric can be put to the test with the assurance that nothing in the process destroys the spermatozoa, and that they may be found if present."

Book Notices

A TREATISE ON PRACTICAL ANATOMY: FOR STUDENTS OF ANATOMY AND SURGERY. By Henry C. Boenning, M.D., Lecturer on Anatomy and Surgery in the Philadelphia School of Anatomy; Demonstrator of Anatomy in the Philadelphia Dental College, etc. Illustrated with 198 wood engravings. 8vo. Pp. 481. Cloth. Philadelphia: F. A. Davis. Price, \$2.50.

The author states that he prepared this work especially for the use of students of anatomy and surgery. He has arranged it so as to make it equally serviceable as a textbook on anatomy and a dissector. It will be found fully abreast of the latest teachings in anatomy.

We are of the opinion that this work will become very popular with medical students, especially those in attendance upon lectures, on account of its comparatively small size and low price. Though not half as large as Gray's Anatomy as regards the number of pages, and containing probably not more than a third as much reading-matter, yet there will be found in it all that pertains to anatomy proper, there being excluded, except in a few instances, microscopical descriptions, accounts of the physiological functions of the various organs, etc. While it is often convenient to have these subjects treated in an anatomical work, yet full

information in regard to them can be had in volumes devoted to physiology.

While the engravings lack artistic skill, yet they answer the purpose very well. The work is very well suited to the wants of medical students attending lectures.

MANUAL OF CHEMISTRY. A Guide to Lectures and Laboratory Work for Beginners in Chemistry. A Text-book Specially Adapted for Students of Pharmacy and Medicine. By W. Simon, Ph.D., M.D., Professor of Chemistry and Toxicology in the College of Physicians and Surgeons; Professor of Chemistry and Analytical Chemistry in the Maryland College of Pharmacy, Baltimore. Third Edition, thoroughly Revised. With 44 Wood-cuts and 7 Colored Plates, illustrating 56 of the Most Important Chemical Tests. Cloth. 8vo. Pp. 477. Philadelphia: Lea Brothers & Co. Price, \$3.25. 1891.

The text-books upon chemistry are probably more numerous than are those upon the subjects of any of the other departments of science. We could almost fill a page with the titles of the chemical works which are used by students in studying in universities, medical and scientific colleges, academies, seminaries, high schools, etc. Many of them are regarded as possessing a great deal of excellence, among which are Attfield's and Fownes', whose authors, we believe, are Englishmen. It may be truly said, therefore, that a work which obtains a footing in competition with the present multitude of works upon chemistry, and prospers, reaching a third edition in seven years, must necessarily possess great merit.

The work is divided into seven parts, as follows: 1. Fundamental properties of matter. Results of the attraction between masses, surfaces and molecules; 2. Principles of chemistry. Results of the attraction between atoms; 3. Non-metals and their combinations; 4. Metals and their combinations; 5. Analytical chemistry; 6. Consideration of carbon compounds, or organic chemistry; 7. Physiological chemistry.

The work shows very plainly that the author has, for a long time, been a teacher of chemistry; and through the experience thus acquired by teaching, he has been peculiarly fitted to prepare a text-book for those engaged in acquiring a knowledge of the science, especially beginners. A chem-

ist, having a profound knowledge of chemistry, might be able to prepare a very brilliant work, highly adapted to the wants of those versed in the science, but totally unsuited for the tyro who has to begin at the beginning in his study of the science and learn the first principles. Students will find the demonstrations of this manual clear and intelligible, and will pursue the study of them with pleasure.

On page 273, the author, in explaining the elements which enter into organic compounds, says: "Why is it that the four elements carbon, hydrogen, oxygen and nitrogen are capable of producing such an immense number (in fact, millions) of different combinations?" To this question, he asserts, but one answer can be given, which is that these four elements differ more widely from each other, in their chemical and physical properties, than perhaps any other four elements.

"Carbon is a black, solid substance, which has never yet been fused or volatilized, while hydrogen, oxygen and nitrogen are colorless gases which can be converted into liquids with difficulty. Moreover, hydrogen is highly combustible, oxygen is a supporter of combustion, whilst nitrogen is perfectly indifferent. Finally, hydrogen is univalent, oxygen bivalent, nitrogen trivalent, and carbon quodivalent. These elements are, therefore, capable of forming a greater number and a greater variety of compounds than would be the case if they were elements of equal valence and of similar properties."

THE COMPARATIVE ANATOMY OF THE DOMESTICATED ANIMALS. By A. Chauveau, M.D., LL.D., Member of the Institute (Academy of Sciences); Inspector-General of Veterinary Schools in France, etc. Revised and Enlarged, with the Coöperation of S. Arloing, Director of the Lyons Veterinary School; Professor of Experimental and Comparative Medicine at the Lyons Faculty of Medicine. Second English Edition from the Fourth French Edition. Translated and Edited by George Fleming, C.B., LL.D., F.R.C.V.S., Late Principal Veterinary Surgeon of the British Army, etc. With 585 Illustrations. Cloth. 8vo. Pp. 1084. New York: D. Appleton & Co. Cincinnati: R. Clarke & Co. Price, \$7.00. 1891.

The particular study of the anatomical elements entering into the composition of the tissues, and which requires the

microscope, is named Histology. Anatomy is the science of organization; it studies the structures of animals when these are dead. It has two divisions—Physiological Anatomy and Pathological Anatomy. If anatomy is devoted to a single species, it is designated Special Anatomy—as human anatomy, or anthropotomy; the anatomy of the horse, or hippotomy. Comparative Anatomy has reference to the study of all animals. When it is restricted to domesticated animals it constitutes Veterinary Anatomy. These definitions we have copied from the work.

The object of this book is the study of *Veterinary Anatomy*. The animals of which it treats belong to the mammiferous class and to that of birds. The domesticated mammals of our climates have their representatives in a large number of orders. Thus we find among them:

1. Of the carnivora, the dog and cat.
2. A rodent, the rabbit.
3. A pachyderm, the pig.
4. Of solipeds, the horse and ass; the produce of the male ass and the mare, *i. e.*, the mule; and that of the horse with the female ass, known by the name of hinny.
5. Of ruminants, the ox, sheep and goat.

With regard to poultry they range themselves:

1. In the gallinaceous or columba order, the genera to which the common fowl, guinea fowl, turkey and pigeon belong.
2. In the order of palmipeds, the goose and duck.

We have given above the classification followed in this work. Other classifications that have been proposed are discarded, because not considered scientific.

This work was translated into English seventeen years ago. It has been reprinted several times since then, but no new edition has been issued. A new or second edition has now been issued, as circumstances indicated that it should be revised and brought up to present requirements. As there was a fourth French edition published last year, it was considered a favorable opportunity for undertaking the task. The first English edition was received, we understand, with great favor in England, in the English colonies and in the United States. In this new edition everything has been done to render the work still more comprehensive, complete and useful. The anatomy of the ass, mule and rabbit has been added, as well as that of the camel. The number of illustrations has been

increased by more than one hundred and thirty; the pages have been enlarged, and the letterpress so modified as to make the reading and reference much easier. A copious index has also been added so as to enhance the usefulness of the work.

Veterinary anatomy, as also comparative anatomy, receives much more attention in Europe than in the United States. It is well worthy the study of medical men, as a knowledge gives them a much more comprehensive and intelligent knowledge of human anatomy, or *anthropotomy*.

The work of Chauveau is undoubtedly superior to any other work upon veterinary anatomy ever published. Every intelligent physician should possess a copy of it.

A PRACTICAL TREATISE ON THE DISEASES OF WOMEN. By T. Gaillard Thomas, M.D., LL.D., Professor Emeritus of Diseases of Women in the College of Physicians and Surgeons, New York; Consulting Surgeon to the New York State Woman's Hospital, etc., and Paul F. Munde, M.D., Professor of Gynecology at the New York Polyclinic and at Dartmouth College; Gynecologist to Mt. Sinai Hospital; Fellow of the American, British and German Gynecological Societies. New (Sixth) Edition. Thoroughly Revised and Rewritten by Dr. Munde. In one large and handsome octavo volume of 824 pages, with 347 illustrations. Cloth, \$5; leather, \$6. Philadelphia: Lea Brothers & Co., Publishers, 1891.

A circular sent us has the following to say in regard to this work: "Prof. Thomas' work was designed to satisfy the wants both of students and practitioners of gynecology, and that it has fully met its purpose is shown by its universal adoption in American colleges, its translation into German, French, Italian and French, and the exhaustion of five very large editions. It is in great measure a cause of the esteem with which American gynecology is viewed in all civilized countries. Excessive preoccupation might have permanently prevented the author from issuing any new edition, and the gynecological students of the world are therefore fortunate in securing a revision in full accordance with the nature of the work and the present status of its science. Dr. Munde has so thoroughly executed his task that his name properly appears as joint author. The list of illustrations has been greatly increased in number, and en-

riched by a beautiful series of accurate drawings, photographically reproduced. The book is destined in its new form to maintain its position, and nothing more effective could be said in its praise."

Prof. Munde performed the whole labor of revision in preparing the work for a sixth edition. The first chapter, entitled "Historical Sketch of Gynecology," has been changed only to the extent of bringing it up to date. All the other chapters have been largely altered, and several entirely rewritten. Several new chapters have been added, such as those on Electricity, Hermaphroditism, Diseases of the Urethra and Bladder, and the Diseases of the Female Breast.

It is stated in the work that the general impression that perineal laceration occurring as the result of labor will unite by first intention without surgical treatment is erroneous. The author states that he has never seen one do so. "Let the limbs be bound together ever so closely, the inevitable passage of lochial material between the cut surfaces prevents union by first intention." Repair, he says, is effected by granulations, and is often very good, but it is never perfect. As a general rule, a lacerated perineum left to nature for repair is never afterwards as perfect as it was before the occurrence of the injury or as it usually is after proper repair by surgical means.

At the present day, the author is of the opinion that no conscientious obstetrician will hesitate a moment to close every perineal laceration immediately after the expulsion of the placenta whenever the rent seems to him large enough to demand repair. A very rare exception might be made in cases where the woman is so exhausted by the labor as to forbid even the slightest prolongation of her sufferings, or where the parts are so bruised as to offer no chance of immediate union. Every physician, in attending upon an obstetrical case, should be prepared to attempt the repair of such an injury, especially if he makes use of instrumental or manual delivery, for lacerations of the perineum generally occur under such circumstances. For this reason no case of obstetrical instruments should be considered complete which has not in it needles and sutures for the performance of this operation. If failure follows, however, never, unless there be some special reason for so doing, attempt another operation before the results of parturition have entirely passed away. This will not be before the lapse of two months

from the time of delivery ; just after delivery there is a reason for operating which has passed away in a fortnight.

It is surprising, as the author states, that while the frequency of both acute and chronic catarrhal inflammation of the Fallopian tubes (salpingitis) is now recognized to be so great that there may scarcely be said to be a pelvic disease in the female which is more commonly met with than this, yet it is only very recently that its existence became known. Pelvic cellulitis and pelvic peritonitis, and even oöphoritis, were for years looked upon as the diseases which we now know to be simple inflammation of the Fallopian tube. True, simple, uncomplicated salpingitis is comparatively rare, and oöphoritis and local peritonitis usually follow or accompany it. The merit, says the author, of having recognized the great frequency of the acute inflammation of the Fallopian tubes, with their complications and consequences, is due above all others to Lawson Tait, of Birmingham, England, who has done more to acquaint the profession with the symptoms, diagnosis and operative cure of these diseases than any other one man.

The thorough revision which this work has undergone by the labor of Dr. Paul F. Munde will cause it to continue to hold its position as the leading American work upon gynecology. Dr. Munde has spared neither time nor labor that the volume may both set forth every advance that has been made in gynecological medicine to the present time, but that it may also represent the most recent views that are interesting and important of the most eminent gynecologists of the world. Not only the medical journals of this country and Europe, but monographs, and papers read before medical societies and discussions have been thoroughly examined in order that the work may be fully abreast of the times and represent the observations and experiences of distinguished men engaged in the investigation of those subjects to which it is devoted. We recommend the study of the volume to gynecologists who desire to be in the front ranks with those who are fully posted as regards the most recent accepted views in the various departments of their specialty, to general practitioners of medicine, and especially to young physicians who, having just received their diplomas, expect to enter upon the practice of medicine, and will be frequently consulted in regard to female diseases. The young doctor will find the work to be a sure and safe guide to him.

HISTORY OF CIRCUMCISION FROM THE EARLIEST TIMES TO THE PRESENT. MORAL AND PHYSICAL REASONS FOR ITS PERFORMANCE, WITH A HISTORY OF EUNUCHISM, HERMAPHRODISM, ETC., AND OF THE DIFFERENT OPERATIONS PRACTICED UPON THE PREPUCE. By P. C. Remundino, M.D. (Jefferson), member of the American Medical Association, etc. 12mo. Pp. 346. Cloth. Philadelphia: F. A. Davis. Price, \$1.25; paper binding, 50 cents.

This will be found to be a very interesting book, as it gives, in small compass, all the important facts relating to an operation which is observed by the Jews and Mohammedans as a religious rite, and by many others as a hygienic practice. The work contains twenty-four chapters; and in these chapters we find discussed the Antiquity of Circumcision; Theories as to the Origin of Circumcision; Spread of Circumcision; Infibulation, Muzzling, and other Curious Practices; Miracles of the Holy Prepuce; History of Emasculation, Castration, and Eunuchism; What are the Benefits of Circumcision? The Prepuce, Phimosis, and Cancer; The Prepuce, Calculi, and other Annoyances; General Systemic Diseases Induced by the Prepuce, etc.

The author seems to be of the opinion that as facts are facts, facts ought not to disturb any one, and, consequently, no apology should be required from him for writing this book. The sacred authors, he says, the Fathers of the Church, who present their thoughts in living words, and ecclesiastical authors have not felt that silence was best. He has therefore followed their example, and exclaims, with St. Augustine, "If what I have written scandalizes any prudish persons, let them rather accuse the turpitude of their own thoughts than the words I have been obliged to use." But we do not think that any medical man or any intelligent person interested in the history of the manners and customs of the people of different nations and of different ages of the world will feel scandalized by anything in the work.

We were of the opinion that circumcision was first performed by Abraham, by the command of the Lord (Genesis xvii. 10, 11). Still, we never examined the history of the rite. But our author states that it prevailed with the priesthood of ancient Egypt, who, besides being circumcised, shaved the whole body as a means of further purification. Among the Greeks, also, he says that the practice existed; that in the time of Pythagoras the Greek philosophers were also circumcised.

The author holds that the practice of circumcision contributes much in giving immunity to syphilis, cancer, ulcerations of the glans—penis, etc. Jews, he says, are far less apt to contract tubercular diseases than Christians, statistics showing that the ratio is four deaths of the latter from phthisis pulmonalis to one of the former. There can be but little doubt, he asserts, that to this particular and well-marked less syphilization the Hebrew race owes much of its exemption from phthisis and from many other diseases, and its greater resistance to ordinary ailments and epidemic diseases.

To physicians, the author says, and we agree with him, the book will prove a source of instruction and recreation, for it contains no little pathology regarding the moral and physical reasons why circumcision should be performed, which he has endeavored to make readable and interesting. The operative chapter will be found particularly useful and interesting to physicians, as he has there given a careful and impartial review of all the operative procedures—from the most simple to the most elaborate—besides paying more than particular attention to the subject of after-dressings.

Editorial.

DESTRUCTION OF A DIPLOMA MILL.—For several years we have heard hints that there existed in Cincinnati, in the northwestern extremity, where are located most of the slaughter-houses, candle and soap factories, a diploma mill in which medical diplomas were ground out and sold for from ten dollars to five hundred according to the willingness and the ability of the purchaser to pay. But as we could not obtain any definite information about the factory, we doubted its existence. No sample of a diploma issued by it ever came under our observation, nor did we ever meet with an individual who had been made a doctor by virtue of its authority to confer upon him the degree of M.D.

This M.D. factory was discovered by a reporter of the *Commercial Gazette*, who was induced to make the search from the information he obtained by answering an advertisement in one of the papers of the city; and the *expose* he made filled nine columns of the Sunday issue of the *Commercial Gazette* of November 14th, including a likeness of the

president, G. W. Van Vleck; a picture of the *college*, a shabby old two-story frame residence of the president, facsimiles of the diplomas and pretended scholarships, etc. The advertisement the reporter answered was as follows: "*Wanted—Physician—By a traveling specialist. Address V, Enquirer Office.*"

In reply to the note the reporter sent the advertiser he received the following:

"Dr. G. W. Bickford—Call at the Palace Hotel at 11 o'clock Thursday morning. Dr. W. H. Hale."

The first question asked the reporter when he called upon Dr. Hale, who, of course, did not know that he was a reporter "on a hunt," was, "Have you ever practiced any?" "Oh, yes. Bruises, dentistry with a tooth-pick, and troubles with the stomach from green apples and election celebrations." After many other questions in regard to *qualifications*, Dr. Hale inquired of the reporter if he had a diploma. He confessed that he had not. The doctor told him that it was essential that he should have one, saying, "I can tell you where you can get one in a little while, for a small amount of money. For \$150, spot cash, I will get you a diploma like this to-morrow morning, with your name and all on it." The itinerant drew a diploma of the *Medical University of Ohio* from his valise, and handed it to the reporter. After considerable talk Hale gave the reporter a letter of introduction to the president of the *University*, which he learned was located in that classic quarter of the city where he found 417 Liberty street. Taking a street-car, the searcher for the diploma mill immediately called upon G. W. Van Vleck, A.M., M.D., president of the *Ohio Medical University*.

In response to the ring of the bell at 417 Liberty street, the door was opened by an old man very much resembling the Old Year. He was about sixty-five years old. The top and much of the sides of his head were bald, with gray hair surrounding the lower margin. He had a long, heavy white beard and mustache. On making known his business, the doctor spoke as follows to the reporter: "It is a grave responsibility that a president of a college takes upon himself. Young men have a hard time in life, and they feel that the time they must give to the preparation for a professional life is time lost. We are often confronted by students who want diplomas before their time is up. They can pass the examination, but I have invariably refused them. It is

an outrage, sir, an outrage, that inexperienced, partly instructed men should go upon the world, into the sick-chamber and trifle with life."

The applicant was amazed. Could he be mistaken in regard to the doctor being at the head of a diploma mill? While pondering the subject, the doctor asked him to what branch of medicine he had been devoting his practice. The reporter replied: "Malarial fevers, typhus, and kindred ailments of a swampy district and cities of bad sewerage." "Well," says the learned president, "one that expects to practice should be well up on the specialty that comes most under his practice. When young men are proficient we try to make the time shorter for them. Your experience would entitle you to such consideration. You say you have practiced in typhus-malarial districts. What would you do in case a patient was taken with congestion, accompanied by malarial symptoms?"

"Well, that would depend upon the stage the disease had reached," replied the reporter. "But in any event a little quinine would not hurt. I would begin with a grain and increase the amount until the desired effect was obtained." "In congestion what would you do? How would you apply it?" The old man did not wait for a reply. He wanted to explain his system. He saw he had his student in hot water, and he must help him out. He turned question after question, and answered them as fast as he asked them. He told stories of the different methods of treatment, and occasionally darted a question at the student. Finally he asked the reporter, who professed to be anxious to obtain a diploma without any medical knowledge, what he would do in the event his remedies did not bring the desired relief, and the patient became worse, in fact, was liable to die on his hands, and he without a diploma, and almost certain to be prosecuted for malpractice, sure of conviction, and a term in the penitentiary." "I would call in another physician," replied the candidate for a medical degree, "and get him to take charge of the case, say nothing, and get out of the country as soon as possible. I don't expect to take hold of a dangerous case; and if one should come up my way unasked, I will find it out before it is too late, and get some one to attend to it."

After very much more talk, the *president of the University* went to a folding lounge, that had a place in the room, and took from a drawer under the seat two diplomas. Another

for specialties was fished out of another drawer. For one of these the moderate charge of \$500 was made. But the reporter informed him that Dr. Hale had only charged \$150 and had agreed to accept \$125. After a great deal of haggling about the price, the price was reduced to \$100, then to \$50, and finally the learned president agreed to let him have it for \$10 if the reporter would relinquish the purpose of traveling with Dr. Hale and set up an office "down town" in Cincinnati, and practice medicine under his auspices, referring all of his difficult cases to him, President Van Vleck. Said he: "You can be one of my pupils. If any one questions your right to practice medicine, refer them to me. When you are fully established you can hang out my sign. When they inquire for Dr. Van Vleck tell them that you are my assistant. No one will bother you except those who style themselves of the regular school. Those fellows are jealous. Of course you will take business away from them, and they will try to run you out. No authorities will bother you," etc.

There are the signatures of ten persons as professors attached to the diplomas of the *Medical University of Ohio*. Not one of the names of these individuals, except Van Vleck, appears in the Directory of Cincinnati, or of any list of physicians of the State of Ohio. The nine are undoubtedly fraudulent. But what will our readers think when we tell them that this diploma mill, that this medical college which has no existence, and which never did have an existence, is a regularly chartered medical college, having a charter granted by the Legislature of Ohio? It was incorporated in 1883, with power to confer the following degrees besides the degree of M.D.—A.B., B.S., A.M., LL.D., and the degree of Doctor of Liberal Divinity, whatever that may be. Capital stock, \$5,500 (on paper, of course), with privilege of increasing to \$100,000.

Ohio has a law with reference to practicing medicine in the State, but it is a dead letter throughout the State. Any charlatan can hang out his sign as a doctor without fear of being molested. The result is Ohio has become the "stamping-ground" of quacks who have been driven out of Illinois, West Virginia, and several other States which have tolerably strict laws that are enforced. It is stated that, within a very few years, one hundred thousand quacks, who have no diplomas, have set up in Ohio who were compelled to leave other States on account of the laws.

The reporter of the *Commercial Gazette* communicated the facts which he had unearthed in regard to the diploma mill, entitled the *Medical University of Ohio*, and Dr. Van Vleck to the Health Officer of Cincinnati, Dr. Pendergast, who took immediate steps to have the old scamp arrested. The warrant was served at 1 A.M. November 15th. The old fellow was in bed, but vigorous ringing of the bell by the officers, with thumps on the door, brought him to the door to inquire what was meant by the disturbance. After reading the warrant to him he was marched off to the station-house, where he was locked in an iron cage.

A law of Ohio enacts that whoever shall make, issue or publish for purposes of sale, barter or gift any certificate, diploma or other writing, or document falsely representing the holder or receiver thereof to be a graduate of any medical school or college, or of any educational school of medicine whatever, and entitled to the privileges or degrees thereby pretended to be confirmed; or whoever shall sell or otherwise dispose of, or offer to do so, any such diploma, certificate, writing or document containing the false representations aforesaid, etc., shall, upon conviction thereof, be subjected to the penalty of a fine of not more than one thousand dollars, nor less than one hundred dollars or imprisonment in the penitentiary not more than three years, nor less than one year, at the discretion of the Court.

It is probable that President Van Vleck will remove his Medical University of Ohio to the Penitentiary at Columbus, Ohio.

It is singular that there is no law against the purchase of fraudulent diplomas.

PROPAGATION OF DEFECTIVES.—In the September issue of the *MEDICAL NEWS* we made some remarks upon the feasibility, or rather infeasibility, of carrying into practice some advice given by one of the present editors of the *Lancet and Clinic* in an editorial that appeared in that journal. In this age and country it is generally admitted that an individual has a right to express his views upon a debatable subject, and even to announce that he dissents from the published opinions of a writer who has had his opinions printed for the edification of the public. When we criticise what has been said by others, we treat them personally respectfully. If the issue we make can not be maintained, it falls to the ground and no harm is done. We call no one

a fool, or insinuate that he is a fool; for if we believed a person to be a fool, who had expressed opinions contrary to those we held, we would avoid seeking a discussion with him. Solomon, or some other inspired writer, if we remember rightly, cautions taking issue with one having no sense.

In a number of the *Lancet and Clinic* published in the latter part of August, one of the editors wrote: "To the State we would say that when this probability" (the probability that one's progeny will be physically and mentally defective) "becomes a certainty, prohibit the exercise of such potentialities." By *potentialities* were meant *getting married*. In response to this remarkable advice we expressed it as our opinion "that even if the State of Ohio, or any other State, should enact a law forbidding marriage to persons mentally or morally 'defective,' it would often be exceedingly difficult to establish the *defect* except in the case of individuals shut up in lunatic asylums or actually suffering insanity. That as regards those who are *confirmed* thieves and thieves by inheritance of the tendency to steal, bank presidents, legislators, government officers, etc., so frequently steal that it would be somewhat difficult to prove that this or that person was a confirmed thief; that he was a thief in consequence of an abnormal inherited condition of his brain—the organ of the mental and moral emotions."

Now, we will not call or insinuate that a man is a fool who will say that he does not believe what we have stated above is true, but we believe that the large majority of intelligent persons will subscribe to it. Again, as regards the statement of the editor that the law of heredity determines the probability whether one's progeny will be physically and mentally "defective" or not, we said that "while it is probable that many 'defectives' may be pointed out who had a 'defective' parent or parents, yet not a few may be shown whose fathers and mothers were of the highest moral character, as also were their previous ancestors."

We understand that the editor of the *Lancet and Clinic*, at some time, was employed in a lunatic asylum, and no doubt it is true, but still he can not convince us that what we have here stated is not a fact. Our opinion on the subject can not be moved, even if he should tell us of the melancholy fate of a half-dozen experts like that which befel the one he relates; namely, that a "few years ago a

noted expert in insanity attempted to uphold the assertion that insanity was not hereditary because children are not born insane. But even the high position he held and his extensive learning did not save him and his silly assertion from the ridicule of sensible people."

It is sad, indeed, that a man of extensive learning should meet with such ridicule from sensible people, but still we are unmoved by it, for we verily believe that sensible people will agree with every word we have expressed. We will even appeal to the editor himself, and ask him if he has not met with "defectives" whose fathers and mothers were of the highest moral character? Visit the prisons, and it will be found that not more than one in ten of the criminals had vicious parents. Some of them have had, we do not deny, but admit, and have always admitted. As regards the "Jukes family" and the "Tribe of Ishmael," we think better evidence will be found in the history of the inmates of the prisons as regards the heredity of crime.

He says that *we admit that we have done a little writing*. Yes, we have done a good deal of writing, and hope to do more. We could mention *a number of journals* to which we contributed before taking charge of the MEDICAL NEWS, but it would not interest our readers probably, and certainly the question whether vice and crime are hereditary or not would not be enlightened thereby.

It is as incumbent to cultivate politeness as honesty, for an individual who violates the common rules of society stands in danger, if tempted, to violate the laws of the State.

LAFAYETTE COLLEGE, EASTON, PA.—This institution has now, we understand, a new president. On Tuesday, October 20, Ethelbert D. Warfield, Ph.D., LL.D., was formerly installed its presiding officer amid impressive scenes and imposing ceremonies, the like of which has never before been witnessed at that famous place of learning. The exercises took place in the large auditorium of Pardee Hall, which was filled to its utmost capacity, with a most distinguished assemblage of educators, clergy, alumni of Lafayette, members of the Faculty, students, business men, members of the Presbyterian Synod of Pennsylvania and West Virginia.

President Warfield, who has just begun his administration, is not a clergyman. In regard to the trustees departing

from the "time-honored custom" of appointing a minister over the institution, electing to the office, instead, a layman, Dr. Cattell, ex-president of Lafayette, said: "This step is not without precedent. Several of our great universities in the East and West have set the example. I need not remind you that eminent laymen now preside over the great historic universities of Harvard, Columbia, and Pennsylvania, whose presidents, until within the present generation, were all clergymen. Cornell, Michigan, Johns Hopkins, Lehigh, and other universities of more recent origin, together with colleges, such as Amherst and Rutgers, whose work, like that of Lafayette, is in a closer relation to the church, have also called distinguished laymen to occupy the presidential chair. The trustees of Hamilton, a college under synodical care like our own, recently announced the election of a layman as successor to the Rev. President Darling."

We regret very much to announce that Prof. Traill Green, M.D., L.L.D., the eminent physician and distinguished instructor, has seen fit to resign the active duties of his chair on account of advanced age. He has served the institution long and faithfully, having given it the best labors of his life. The trustees, having accepted his resignation, immediately elected him an Emeritus Professor. Professor Green, besides having been connected with Lafayette College for many years, was one of the founders of the American Academy of Medicine, organized a few years ago, and is one of its ex-presidents. He is also an ex-president of the Pennsylvania State Medical Society. He is now seventy-seven years old. He has been connected with Lafayette, with but one intermission, since 1837. He acted as Professor of Chemistry from 1837 to 1841, and then for six years was Professor of Natural Sciences at Marshall College. He again resumed the chair of Chemistry in Lafayette, which he held until 1865, when he was given the chair of Adamson Professor of General and Applied Chemistry. When the Law Department was started, he was given the chair of Medical Jurisprudence. About 1877 he was made Dean of the Pardee Scientific Department. For nearly a half century he has labored at Lafayette College, beginning when he was but twenty-four years old. What a splendid record! How greatly it would be to the advantage of young men to imitate such an example.

OPISTHOTONOS WITH TRISMUS.—We copy the following from the *Homœopathic News*, of St. Louis. May be some of our readers will be edified by it: "When I removed the iodoform dressing, to say the foot stunk" (the foot had been lacerated by a corn-sheller) "is to express it mildly, but the worst was, the child threw himself back into his mother's arms with his head drawn back at right angles with his trunk, his jaws firmly set, the muscles of his neck rigid. A sudden case of opisthotonos with trismus. I again applied the dressing of N. A. Calendula, gave in turn acon., nux., gels., bell., pass. inc., mag. phos., calc. phos., but under all these and some other means, such as the injection of chloral hydrate, the body remained rigid and the jaws firmly set. On the tenth day after I removed the dressing of iodoform I discovered small air bubbles of saliva coming from between his teeth, which led me to think of nat. mur. 6x, which completely relieved the case in twenty-four hours."

The thought of what might have happened the poor boy, if "the air bubbles of saliva coming from between his teeth" had not been discovered after the lapse of ten days, is depressing. A continuance of the "opisthotonos with trismus," for another ten days, without relief, would probably have proved fatal to the little patient. To a "regular," the "air bubbles of saliva" would not have suggested the administration of nat. mur. 6x, and consequently the boy must have died under his treatment.

Miscellany.

EPILEPSY.—In a case of epilepsy of several years' standing, says Dr. W. E. Postle, West Jefferson, O., I have used Peacock's Bromides with perfect satisfaction to myself and patients. It controls the spasms perfectly and seems to agree well with the stomach.

SAMPLES of Sander & Sons' Eucalypti Extract (Eucalyptol), gratis, through Dr. Sander, Dillon, Ia. Eucalyptol stands foremost as a disinfectant, is a perfect check to inflammatory action, and invaluable in zymotic diseases. Meyer Brothers Drug Company, St. Louis, Mo., sole agents.

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Original Contributions.

Some Points in the Diagnosis of Diseases of the Skin.

BY A. H. OHMANN-DUMESNIL,

Professor of Dermatology and Syphilology in the St. Louis College of
Physicians and Surgeons.

The study of diseases of the skin seems to be the *bête noire* not only of medical students, but of the mass of the medical profession as well. An idea seems to have gained ground that everything appertaining to cutaneous affections is a *terra incognita*, and that there are secret arcana to which the neophyte can gain access only by the process of initiation into certain secrets. That this is entirely fallacious stands to reason. The general principles of pathology, of etiology, and of therapeutics find their applications in dermatology as well as in any other special departments of medicine. And here I wish to say, that there are two things in which especial weakness is manifested by the practitioner in respect to diseases of the skin; viz.: treatment and diagnosis.

I will first say a few words in regard to treatment and will then take up the subject of diagnosis, which, after all, is the most important, because the treatment depends, in a great measure, upon it. The general principles of therapeutics govern the treatment of dermatic disorders. As all know, we have three general classes of inflammatory affections—the acute, the sub-acute, and the chronic. If no other method existed to discriminate one from the other, the simple history of time should serve the purpose. It is manifestly obvious to any one that irritants should be avoided in an acute condition, and *vice versa*. But practitioners do not seem to think of this. They lose their heads so soon as the disease

is one involving the skin, and prescribe whatever recipe they may have seen in some medical journal which is recommended for the disease which they imagine is the one before them. In addition, as a matter of course, arsenic is given internally. I do not wish to be at all severe, but this is the general tendency, although sulphur externally and arsenic internally seems to be the favorite routine. Of course, there are many practitioners who are well informed on cutaneous affections, and whose therapeutics are good so far as they go; but, unless located in large cities, where there is easy access to special remedies, they are handicapped.

However, as I intimated before, the principal factor in the prevention of success lies in a faulty diagnosis. In respect to the therapeutics the assumption has been made that the general troubles which not only frequently underlie and cause skin diseases, but which also tend to perpetuate them, can be successfully recognized and treated.

To come to the subject matter of this paper: It is absolutely necessary, as it is in the case of diseases in general, that nosology should be familiarized. The simplest classification—that adopted by the American Dermatological Association—should be carefully studied and retained. Once acquired, the matter of diagnosing an affection of the skin becomes merely an analytical study involving some judgment and observation. A thorough knowledge of what constitutes lesions is absolutely necessary; then the naming of the disease, under such conditions, is an easy matter. I will not give the classification here, as it is within easy reach of all. What I desire to do is to call attention to a few points in connection with diagrams which will facilitate the recognition of cutaneous affections.

As you are well aware, itching is quite a prominent symptom in a number of diseases. This should lead to careful inquiry and examination. Because there is itching present is no reason to suppose that it is eczema. And yet this is an error which is quite common. Because this pruritus is intense it does not signify that this is the disease which is present. A fact which is too often lost sight of is that there is itching present in all parasitic diseases of the skin. Not only this, but in a parasitic trouble of long standing, the scratching, often of a severe character, produces a number of lesions which are apt to be deceptive in

appearance. An inquiry into the history of the trouble, its course and duration, together with a careful examination of the lesions, will help to clear up any doubts. Add to this the distribution of the lesions, and the character of the inflammatory trouble, and we have still further evidence of a positive character. Finally, the presence of the parasite is positive proof of the character of the trouble and its absence eliminates this factor. Another point in connection with itching, and one not to be forgotten, is that syphilitic lesions itch to a certain degree when situated in hairy parts. This should lead us to inquire as to any specific history. The presence of lesions in other portions of the integument will, of course, act as a great help.

Vesicles are lesions whose true value, from a diagnostic point of view, is not fully appreciated. The morphology and distribution of the various kinds of vesicles is a subject comparatively easy to acquire, and greatly facilitates the diagnosis of dermatic affections. We may divide vesicles into three varieties; viz.: disseminate, grouped, and inflammatory. In the non-inflammatory disseminated vesicles we have an evidence of functional disturbance on the part of the sweat glands, whether this be idiopathic or symptomatic in origin. The inflammatory disseminated vesicles are always surrounded by an areola, and are indicative of some acute inflammation of the skin; while, when we find them in groups, we have a herpetic disease of the skin to deal with. It is thus seen that a simple inspection enables us to immediately refer the disease to a particular group, and this greatly simplifies the process of making a correct diagnosis. If we take into consideration the subjective symptoms accompanying the lesions, we have added signs which will individualize the disease almost with certainty. A further point lies in the evolution of the lesion. In some cases it will be noted that certain lesions apparently preceded the appearance of the vesicles, and this is a valuable diagnostic symptom, in some instances. However, the most valuable point to remember is, that a grouping of vesicles, surrounded by areolæ, constituting one or several patches attended with pain and burning, and perhaps itching, constitutes a herpetic lesion which is not to be confounded with any other variety or process. Moreover, in this herpetic condition the vesicles are very apt to coalesce, a condition rather uncommon in the other vesicular troubles.

Bullæ or blebs are lesions which are quite conspicuous in appearance and are either inflammatory or idiopathic in origin. In the case of the former we find the lesions caused by burns or inflammations of a high grade, such as erysipelas. In such cases the symptoms of inflammation are quite pronounced. In the idiopathic form they are not so marked, and concomitant symptoms are present which are quite characteristic. A particular form, however, and one which is very apt to puzzle the observer, is that due to the artifices of malingerers. Here it is that diagnostic skill of the highest character will frequently prove of little or no avail. The ingenuity and tact of the physician are called into requisition, and it is more the motive of the patient than the actual condition which will lead to any suspicion. Careful watching will generally lead to the detection of the imposture and to a speedy termination of the artificially produced condition, as well as to a confession of the deception which has been practiced.

Scales or squamæ should be carefully examined on account of their importance from a diagnostic point of view. Their composition, thickness, color, size, consistence, and abundance all bear important testimony to the affection which they characterize to a certain degree. Thus, they may be composed of sebum or consist of flat epithelial cells, derived from the horny layer of the epidermis. They may be furfuraceous, thick, papery or heaped up. The color may be grayish, yellow, white, blackish or silvery. In size they may vary from as large as the cross section of a pin to large sheets. They may be friable or tough, greasy or leathery. On the other hand, they may be abundant or scanty. They may be the result of some former process of long duration, or be the prominent symptom almost from the inception of the disease. To quote a few familiar examples. In seborrhœa capitis we have branny scales, rather abundant, of a green feel, composed of sebum. In pityriasis capitis the scales share in the same general characteristics with this exception—they are composed of horny epithelial cells. In psoriasis we have large scales which are rather thick and of a silvery appearance; in squamous eczema the scales are not so adherent and present a dull appearance. In psoriasis the scales are adherent, and upon being removed the underlying surface presents a large number of pin-point-sized bleeding points. In eczema the surface is dry, as a rule.

In the exanthemata, desquamation occurs over large areas, the scales being thin and papery. In pityriasis rubra we also have large, thin, papery scales thrown off, but they immediately re-form and are continuously shed in large quantities, a condition not holding in the desquamation of the exanthemata. Such are a few of the many and varied symptoms which are continually met with in the treatment of diseases of the skin. Enough has been said to show that it requires some observation and discrimination to properly appreciate the signs which present themselves. The majority of physicians are too prone to overlook some of the most interesting as well as important objective phenomena in cutaneous affections under the mistaken idea that particular difficulties encompass the subject. And yet they will devote as much, if not more, diagnostic skill, ability and acumen to an affection of the lungs, heart or liver, and consider the time well spent. It is well spent; but, at the same time, the study of phenomena which call for the exercise of the highest powers of observation, and discrimination as well as judgment, should certainly not be considered lost, or, in any way, a drawback to improvement.

Perhaps one of the principal reasons for this aversion to dermatology lies in the fact that patients who complain of the slow progress of their cases, as patients are prone to do, can triumphantly point to their affection as affording ocular evidence of the truth of their statements. This is certainly annoying to the practitioner, and unless he is acquainted with the disease, the annoyance will probably be increased by reason of the fact that he rashly made promises in regard to the course and probable rapid termination of the disease. A little knowledge aided by diagnosis would give a better opportunity of making a correct prognosis and much trouble be thereby avoided. It is for this reason, if for no other, that a clear conception of some of the points in diagnosis is of the highest value.

TO REMOVE THE ODOR OF IODOFORM.—While there are several preparations that will remove the odor of iodoform from the hands, the most of them merely substitute an almost equally unpleasant odor. The *Deutsche Medizinal Zeitung* claims that washing the hands in linseed meal and water, once or twice, will cause an immediate disappearance of the odor of the drug.

Glandular Swellings of the Neck.

BY R. R. HOPKINS, M.D., RICHMOND, IND.

By the term scrofulous I mean nothing more than a disposition to inflammation of the mucous surfaces of the body manifested by catarrhal conditions of the nose, stomach and intestines, or by the swelling of the glands in various parts of the body eventually ending in suppuration and ulceration. Sometimes these conditions are more prominent in scrofulous inflammation, affecting the skin or joints of the body. A remedy for scrofulous manifestations of any character is to alter the nutrition and circulation of the body, so as to prevent these inflammations as much as possible. To do this, one of the first things required is to avoid unhygienic conditions, as a sedentary life, unwholesome food, living in illy-ventilated rooms, and lack of proper bathing. The diet, I think, in such cases should consist of grains, fruits and vegetables. Use but a small amount of meats, tea, coffee or condiments, and let there be a sparing use of milk, butter and eggs. It is well to guard against overeating, but eat plentifully, and drink freely of pure soft water between meals. Two or three times a week the skin should be thoroughly cleansed by a full bath for a few minutes in a tub, or by a sponge bath of tepid salt water. For topical treatment use fomentations or flannels wrung out of hot water, and put around the neck in the earlier stages every day for twenty to thirty minutes. If, however, the swellings do not subside after three weeks, the hot applications should be discontinued until such time as it is manifested that the glands will certainly suppurate, when they may be used to hasten this process. In the first place they are beneficial by promoting a better and increased circulation and absorption of the products of early inflammation, and in the second place by promoting early suppuration. Unless fomentations relieve quite speedily they should not be continued, because they may excite growth during the middle stages of the tumor. Painting with iodine is a treatment much in vogue and is permissible; or a compound iodine ointment may be used in the earlier stages, before pus formations occur. Oftentimes we can get excellent results from small doses of the iodide of potassa, but it must not be continued in any case too long. Electricity is of little avail. Wearing a wool wet compress around the throat

covered with flannel, changing as often as it becomes dry, night and day for weeks, is a good remedy. As soon as it is ascertained that pus is present, the swelling should be freely opened in order that it may be evacuated and ulceration checked. This proceeding will limit scarring; for if an abscess be left for the pus to find its own way out, a larger surface will be destroyed, and a greatly increased cicatrix will result. In not a few cases repeated swellings occur from year to year and become troublesome. Under such circumstances it is advisable to remove the glands with the knife.

It sometimes happens that a diseased condition of the glands will be met with in other parts of the body than about the neck. But the glands of the neck are enlarged frequently from other causes than a scrofulous taint. The lymphatic glands oftentimes become inflamed and suppurate in consequence of irritation from some cause. They may become the seat of abscess. In scarlet fever the glands of the throat become enlarged from the irritation produced by the poison of the disease; in gonorrhea the glands in the groin commonly swell; and in the case of many other affections the neighboring glands become swollen in consequence of toxic matter being conveyed to them by lymphatic vessels proceeding from a diseased part.

There is a troublesome affection of the glands oftentimes met with, marked by slow enlargement with no pain attending their increase in size, and having a dense, hard feeling when manipulated. They sometimes continue for years, especially when the patient declines to receive any treatment in consequence of them. These sluggish swellings are witnessed in persons of a syphilitic and cancerous diathesis.

Chronic enlargements of the lymphatic glands will be observed in scrofulous and tubercular diseases of the mesenteric glands in children, constituting *tabes mesenterica*. Such large glands as the liver, kidneys, pancreas, spleen, thyroid and thymus glands, testicles, etc., have their special diseases.

Baths for elderly people is what a writer in the *Annals of Hygiene* recommends. He says that they should last for half an hour, during which time the body soaks up a few pounds in water. The bath must be kept at a temperature of 88° or 92° F. He claims to base his recommendation on facts gained from observation.

Bald Heads.

BY ALBERT E. CARRIER, M.D., DETROIT.

Read before the Michigan State Medical Society.

Overlooking the uncovered heads of a large number of people, one may easily arrive at an estimate of the frequency of baldness among the male sex. A woman's uncovered head is *usually covered* and absence of hair on her scalp is not visible; but the number of bald pates in sight is sufficient to show that alopecia is not uncommon. Baldness may be a crown of honor, but its possessor becomes a very conspicuous individual, and, if the baldness, instead of occurring in a single spot over the vertex, is made up of several distinct and separate patches, it is in the extreme disfiguring. We are accustomed to look upon bald heads as an inheritance of the aged, the result of the general atrophy of tissues occurring at that time of life, and, of course, permanent, and beyond any relief from medication. But if it appears before the age of forty, it is the result of some pathological condition, that, with proper treatment, would have resulted in a saving of the hairy covering of the scalp. The enormous sale of nostrums warranted to restore to bald heads a natural hairy covering, is evidence of the fact that alopecia is not a desirable possession.

To every hair is given a certain period or length of life, which varies from four months to as many years. This may be called the natural life of a hair, and, once reached, the hair falls out, and is replaced by another which may grow from the same papilla, or from a new papilla developed by the side of the old one, or from the hair follicle. In normal conditions of the scalp, each succeeding hair has the same length of life as its predecessor. Other things being equal, the thicker the hair is, the longer is its life, and a gradual decrease in the diameter of hairs replacing those that have fallen out is to be taken as an indication of approaching baldness. The normal scalp covering of hair, then, depends upon new hairs taking the place of those that fall out, and being of the same size and having the same length of life.

In health the daily loss of hair varies in number between thirteen and two hundred. Around the border of a healthy scalp will be found shorter and pointed hairs; normally the

term of life of these pointed hairs is less than that of the other hairs, and, in the daily shedding of hair, an equal proportion exists between the short, pointed hairs and the others, of about one to twenty. Any increase of this proportion is evidence of disease. The explanation of this is, that these hairs are gradually taking the place of healthy hairs, and, as the disease progresses, they finally yield to the fine *lanugo* hairs, and later, complete loss of hair results. Baldness occurring in the course of acute disease, as in erysipelas, syphilis, typhoid fever, eczema and the exanthemata, is usually replaced, during and after convalescence, by the normal covering of hair; cases occurring over limited areas, as the result of severe inflammation, will be followed by recovery, if the hair follicle has not been destroyed in the process; acne and lupus erythematosus sometimes cause permanent baldness, and late manifestations of syphilis in like manner cause a permanent alopecia. Congenital baldness is usually a temporary affection, the scalp covering developing between the second and ninth years of life; it is sometimes, however, permanent. Premature baldness, dependent upon heredity, is incurable.

Our interest will naturally center about those cases which are amenable to treatment, and which experience shows may be cured. We find they occur in three classes, viz.: parasitic, seborrhœic and nervous, which we will briefly consider. Disturbance of function of the sebaceous glands is the most frequent cause of premature baldness. You who have examined cases of severe seborrhœa, with its masses of greasy, dirty crusts, mingled with hairs and attended by a disgusting, nauseating odor, will not wonder at being consulted regarding its cure, and the probabilities are that, with proper treatment, the seborrhœa will be cured and the hair saved to the patient. I do not know but it would be better if all cases of seborrhœa were of this character. If the disease has existed for some time, you have noticed that under the old crusts the skin is grayish and gives the appearance of beginning atrophy, the result of simple constant pressure upon the part, and, if not arrested, it ends in atrophy of the hair papilla and permanent baldness. Another form of this disturbance has a very different appearance, and makes its approach in a most insidious manner, so that medical aid is not sought until late in the disease, and when the rapid loss of hair calls attention to the trouble. The condition I refer to is alopecia furfura-

cea ; it begins between the ages of fifteen and twenty-five years with an increased desquamation of fine branny scales from the scalp ; the scales are abundant, filling the hair and falling over the clothing. All parts of the scalp are not affected, but principally the vertex and sides, sparing the occiput. The scales may be removed by the use of oil, soap and water, but in a few hours the surface will be again covered by them. The skin is healthy in appearance under the scales, and has its epidermis intact. This desquamation may continue for a number of months, or even years, before marked loss of hair will occur.

There are no subjective symptoms calling for medical assistance ; at times there is slight pruritus, but, sooner or later, it will be noticed that with each dressing of the head a constantly increasing number of hairs are combed out, and even in the intervals between the combings they fall out ; usually within one year it will be noticed that the hairs are not being replaced, and a marked thinning will be found a little back of the anterior border of the hair, and another spot near the vertex, these two spots finally shedding all strong hairs, and around the borders of the bald patches the hair will be noticed to be thinner. As the rete cells are continuous from sebaceous gland to outer root sheath, and fatty metamorphosis of these cells in the gland is the cause of the desquamation, it is but reasonable to suppose an extension of this process to the root sheath to be the cause of the loosening of the hair and final destruction of papillæ. The disease is more often met with in men.

Microscopic examination of the skin from a patch of alopecia pityrodes shows thinning of the true skin, while the hairs show atrophic roots. The disease sometimes occurs as a sequela of variola, continued fevers, syphilis, etc. Alopecia areata is characterized by the sudden or gradual falling out of hair in patches, varying in size, and usually circular in outline. The hair may fall out at once and the size of the patch be bordered by healthy hair, and never increase, or the loss of the hair may be slower and the patch gradually increase in size. The denuded surface, in either case, appears perfectly normal ; it may look a little whiter than surrounding skin, and at times the patches may seem a little depressed, but there are no vesicles, pustules, scaling, etc., and the subjective symptoms are practically nil. At times slight itching may occur. After the disease has lasted a certain length of time the skin shows signs of

atrophy. Young people are attacked by preference. Some cases are ushered in with evidences of a general disturbance of the system, manifested by anorexia, lassitude, and sometimes by severe neuralgia; when the neuralgia is one-sided, the loss of hair occurs on the side attacked by the neuralgia, but in the largest number of cases no such symptoms are present, patient appearing in most robust health.

In old patches reddened by irritation the redness remains for a longer time than it does in the healthy skin, showing some disturbance of the circulation, but the microscope reveals only an atrophied condition. Views vary as to the cause of the disturbance, between its being a tropho-neurosis, or a parasitic affection. I believe the largest number of cases of alopecia areata are parasitic. If you have been interested at all in the statistics regarding frequency of this disease in all countries, you will have noticed that when tinea tonsurans is prevalent, there will be many cases of alopecia areata. Hebra's school is antagonistic to the theory of parasitic origin of the disease, but you find in Germany relatively few cases of this disease, or of scalp ringworm, while in France both affections occur frequently, and her authorities incline to a parasitic origin. Undoubtedly cases occur from organic or functional disturbance of the nervous system, as when the alopecia is general, or ushered in and attended by severe neuralgia, and those cases where the lesions, while numerous, are very small and depressed below the surface, the depression marked and short-bordered. The alopecia, I believe, in this last class will always remain. But all these cases, and those resulting from injury to nerves, will account for less than one-fifth of all the cases of alopecia areata. During the past year I have treated an unusual number of cases of ringworms of scalp and body.

The characteristic appearance of scalp ringworm, with its broken, twisted hair, scales, etc., would give little difficulty in the way of diagnosis, but when other children in the same family or neighborhood show cases of alopecia areata, with perfectly smooth, white patches, and the hair falling rapidly and the individuals in apparent perfect health, and none of the common symptoms of ringworm, we are still warranted, I believe, in ascribing their causation to a parasite, at present unknown. Two cases under my care at my clinic at St. Mary's Hospital Free Dispensary, I will use as an illustration. S. B., æt. ten, healthy, well-nourished

boy, parentage English, came to me with a well-marked patch of tinea tonsurans, dollar-sized. Microscopic examination showed presence of the trichophyton. A month later an older brother came to me with two patches, size of a half-dollar each, white and smooth, perfectly free from scales, broken hairs, etc. More than this, the hairs came out suddenly; he was in perfect health, no evidence of nerve disturbance. Repeated examinations of hair failed to show the trichophyton. Was the second case parasitic? I treated both with parasitocides and extracting hairs, etc. The case of undoubted ringworm is under treatment yet, while the doubtful case was cured in three months. Observers have found so many parasites as the cause of alopecia areata, that discredit has been cast upon the parasitic theory of origin; but my study of numerous cases, although unable to find a parasite that is constantly present, leads me to the conclusion that a fungus is the cause, and from frequent observance of cases like these narrated, I believe it to be a parasite allied to the trichophyton. It may be situated in other portions of the skin than hair or hair follicle; at all events, I find nothing to contraindicate a parasitic origin, and cases occurring in otherwise perfectly healthy individuals, I shall treat with parasitocides.

Of tinea tonsurans as a cause of baldness, but little need be said, for if the disease does not pass to the kerion stage, new hairs will replace those that fall, and even without treatment the disease will cease when patient reaches adult life. With severe treatment (croton oil as an example) destruction of the hair may result. As long as hair papillæ evidence a capacity to grow hairs, even if they are the most minute lanugos, there is possibility of cure. We have stated that many cases of baldness occur in otherwise perfectly healthy individuals, but for this very reason we should be the more thorough in our examination for constitutional disturbances; even the slightest ailments should be thought important and treatment directed to their removal. I believe that attention in this direction should precede all other medication for restoration of the hair, I care not whether the case be parasitic, nervous or seborrhœic in origin. Much of the tediousness of these cases is due to the overlooking of coincident, slight ailments. I shall only call attention, in this paper, to local medication.

The mild form of seborrhœa (alopecia pityrodes) from this fact (of mildness) is often neglected, until treatment is

valueless. It should come under treatment early in its course, before the hairs begin to fall out, and any case of dandruff or seborrhœa should, when first noticed, be most thoroughly treated. Patients do not like the care and annoyance, nor to take the time, to follow the necessary treatment. There is no disease which tasks the patience of patient and practitioner so severely as that form of seborrhœa. In the first stage of alopecia pityrodes we have to overcome the fatty metamorphosis of gland cells, and consequent formation of scales, but first the scalp must be cleansed by soaking over night with some bland oil, keeping it in constant contact by covering the head with a flannel or oil-skin cap. The oil must be freely and thoroughly applied; in from twelve to twenty-four hours the scales will become brittle, and then the scalp should be thoroughly washed with soap and water, douching afterwards with hot, followed by cold water.

After drying with a soft towel, the scalp is ready for some stimulating application; my preference is for those that can be used as lotions, rather than as ointments. These applications empty the glands of the accumulated sebum, increase the blood supply, furnishing needed nutriment, and stimulate muscular activity. The mildest remedies, that will accomplish the desired effect, should be used, as it is not severe, but mild, stimulation that is sought. The medicines used for this purpose may be corrosive sublimate, two to five grains to the ounce, or carbonate of potassium, five to fifteen grains to the ounce, or equal parts of glycerine and water, or naphthol, ten to fifteen grains to the ounce; or we may use ether, tar, sulphur, etc. I lay less stress upon the choice of a remedy than I do upon its thorough application and persistence in its use; following the application of any of the medicines named, it will be noticed that the scalp is dry and the hair lusterless, evidencing a need of fat, which we must supply by external application, not to the hair, but directly to the scalp, separating the hairs and applying the fat to the scalp by means of a small tooth-brush, rubbing it well in.

The treatment as I have outlined it, should be repeated every second or third day, until it is noticed that the scales do not form as rapidly as formerly, when the intermissions may be longer, say every third day, then once a week, but not ceasing altogether for several months. Hairs will cease falling out as soon as we have overcome the seborrhœa, but in

many follicles only the fine lanugo hairs will be found; treatment to induce a stronger growth should then be begun, by first plucking out the soft, fine hairs; under no circumstances cut them; following the epilation by applications to stimulate hair follicles; using, for this purpose, tannin, ten grains to the ounce of glycerine, or quinine, ten or fifteen grains to the ounce. But probably the best of all is common salt, fifteen to forty grains to the ounce of water. The strength of any of these applications should be as mild as can be used and produce the desired irritation. The scalp should be oiled after each treatment.

Galvanism is also a remedy of great value, using a mild current (two to four milliamperes) for ten minutes each day.

There is one remedy, which, internally administered, seems to have a little influence in stimulation hair growth, namely, pilocarpine. The muriate may be given in doses of one-tenth to one-sixth of a grain, twice daily.

With persistent treatment, as I have outlined, I believe most cases of baldness, depending upon alopecia furfuracea, may be prevented. A guarded prognosis, however, should be given, in every case; for even promising cases will, at times, in spite of all treatment, end in permanent alopecia.

Baldness, due to functional disturbance of the nervous system (some form of alopecia areata), usually ends in recovery. The brilliant results of treatment in some of these cases is entirely independent of any medication that may have been used. The tediousness of recovery in other cases, and especially those in which the alopecia is universal, calls for varied and energetic treatment. Massage, two or three times a week, I have found of great benefit, also douches of hot water, followed at once by douches of cold water and then using a solution of salt in water, following with application of some fat. Of great value is galvanism and faradization, using mild currents (two to four milliamperes), in five to ten minute seances every day. The various stimulants used in the treatment of alopecia pityrodes will also be found useful. Cases may last for months, or even years, and should never be considered incurable as long as even the finest lanugo hairs are discernible. Cases due to traumatism, ending in destruction of nerve, are incurable, but taking all forms of nervous alopecia areata, we find they only form some twelve per cent. of all cases; the balance I believe to be parasitic, and in addition to

other medication, call for parasitocides. It is found very difficult, in ringworm of the scalp, to bring the parasite and parasitocides together, although we know the parts attacked by the fungus, and, as so far we have not been able to locate the parasite of alopecia areata, treatment is largely empirical, but I believe the good effects of treatment by strong applications of the bi-chloride of mercury (grains, five to ten to the drachm), and the strong current of electricity, are due to their destroying the parasite. By all means epilate before using whatever remedy is selected. Blistering with oleate of mercury often gives good results.

Tinea tonsurans will cease when the individual becomes an adult, and unless the disease has ended in kerion stage, causing destruction of hair papillæ, the baldness will not be permanent. The treatment of scalp ringworm is tedious, but cure will follow if it is persistent. It consists in epilation every third day at least, and then using one or the other of the parasitocides already mentioned. The best, I think, is beta-naphthol, ten to twenty grains to the ounce of alcohol.

In conclusion. First—Alopecia, occurring before the age of forty, will, in a large proportion of cases, end in recovery if properly treated, cases due to heredity, or where hair papillæ is destroyed, excepted.

Second—Alopecia areata is in large proportion parasitic, with the parasite and its habitat undiscovered, but the parasite is probably allied to the trichophyton.

Third—Treatment, in any case, should begin early and be persistently carried out, more being accomplished by thoroughness than by choice of remedies.

Fourth—An unfavorable prognosis should never be given, as long as hair follicles show even the finest lanugo hairs.

The salicylate of mercury is one of the recently introduced therapeutic agents which seem to have come to stay. A physician who has thoroughly investigated its use says: "1. That it is readily borne; it does not give rise to gastralgia, enteralgia, or diarrhœa, which frequently follow from other mercurials, not even excepting the protoiodide and the tannate. 2. It never produces mercurial stomatitis. 3. Its action is more energetic than that of any other mercurial salt now in use." He recommends a dose of one-third grain in pill form, three times a day.

Selections.

Sweet Oil in the Treatment of Gall-stones.

A Collective Investigation by the Therapeutic Section of the Philadelphia Polyclinic Medical Society.

BY THOMAS J. MAYS, M.D.

The subject of the action of sweet oil in the treatment of biliary colic and catarrh of the hepatic passages has recently been warmly discussed. There are many who regard this agent as being very much overrated, while many others believe that it has a very beneficial influence on this disease. In view of the divided opinions on, and the importance of, this matter, the Therapeutic Section of the Philadelphia Polyclinic Medical Society has, as a part of its scientific work, undertaken a special collective investigation concerning the clinical value of this drug in gall-stone colic. With this end in view, the undersigned committee was appointed, and directed to send a number of circulars to the members of the profession, of which the following is a copy :

Sex and age of patient ? Seat of pain ? Jaundice ? Previous attacks ? Did you test any other remedy, and with what results ? Result of treatment with olive oil. Remarks.

To these circulars nineteen replies were received, and thirty cases of gall-stone colic treated with olive oil were reported. To these members of the profession the warmest thanks of this committee are due for the promptitude with which they responded. Additionally, the committee imposed the task upon itself to collect, as far as possible, all the previously reported cases of biliary colic which were treated according to this method, and succeeded in gathering records of seventeen cases, making altogether a list of fifty-four cases.

An analysis of these fifty-four cases shows that there were about one-third more females than males who suffered from gall-stone colic ; that two died, that in three negative results were obtained, and that in fifty, or in ninety-eight per cent., positive relief was afforded. These results make a better showing still, when we consider that one of those who died was suffering from adhesive obstruction of the bile-duct—a disease which no procedure, either medical or surgical, could have remedied. Nor do these figures give us a true estimate

of the favorable action of olive oil in this disease; for two of the observers state that they have treated forty other cases of biliary colic without a failure, but of which they had kept no record—making in all a collective return of eighty-nine cases—showing the great value of this drug.

These cases illustrate, then, the positive efficaciousness of sweet oil in the treatment of gall-stone colic, and the question naturally arises, therefore, as to the manner in which this agent acts. Dr. Rosenberg's experiments ("Ueber die Anwendung des Olivenöls bei der Behandlung der Gallensteinkrankheit," *Therapeutische Monatshefte*, December, 1889, S. 542) demonstrate beyond a doubt that it largely increases the quantity of bile secreted, while at the same time it diminishes its consistency. But how does it accomplish this? Does it stimulate the biliary channels by coming in contact with their openings into the alimentary canal? Or is it decomposed into fatty acids and glycerine through the instrumentality of the pancreatic juice, and does the "glycerin" so liberated exert in the duodenum an action similar to that which takes place when it is introduced into the rectum," causing a powerful reflex peristalsis—an ingenious theory suggested by Dr. D. D. Stewart? Or does it act in accordance with the hypothesis formulated by Virchow, who shows from his own experiments (*Therapeutische Monatshefte*, 1890, S. 86) that it is absorbed from the alimentary canal, is excreted by the liver, and is thrown into the bowels again through the biliary passages? The last of these theories appears to be the most rational, because it explains certain well-known features in its action, and also places it on a level with the action of other cholagogues. We may conceive, then, that the beneficial influence of oil consists not so much in dissolving the biliary concretions, as it does in increasing the biliary excretion, in flushing, and in lubricating and washing out the passages of the liver.

Another point of interest in this collection is as to the proper dose of the oil. Are the large doses necessary which were administered to most of the cases in this collection? It appears not, for eight of the cases (Nos. 11, 12, 15, 16, 22, 23, 24 and 25) received only dessertspoonful doses every three or four hours, and apparently with the same prompt and positive relief as that which was afforded by doses of from five ounces to one and two pints. If this should be confirmed by further experience, it would be a great practical gain, in view of the fact that a great many persons show

a strong aversion to all kinds of oil, especially if they are to be taken in large quantities.

Furthermore, according to the observation of Dr. Stewart (Case 37), it does not appear to make any difference whether olive or cotton-seed oil is used. Indeed, it is well known that much of the oil which is sold as olive is in reality refined cotton-seed oil; and Dr. Stewart's observation tends to show that in all probability any bland oil will have the same effect on the disease under consideration.

In conclusion, the committee desires to congratulate the Polyclinic Medical Society on the selection of a subject for collective investigation which has proven so fruitful of practical results as that which is embodied in this report; and expresses the hope that it may continue its good work of testing therapeutic agents in a clinical way. It is true that animal experimentation often points out the path in which the usefulness of a drug lies, but clinical and collective research is, after all, the crucial and final test of all true therapeutic progress.

THOMAS J. MAYS, M.D.,
HOMER C. BLOOM, M.D.,
Committee.

DISCUSSION.

DR. WILLIAM S. STEWART: I wish to show the society a stone which was obtained this summer from a lady between seventy and eighty years of age. She had suffered with periodical attacks affecting the bowels and passing off with simple treatment. On the last occasion she suffered excruciating pain in the region of the cecum, and I was sent for. Thinking there might be some inflammatory affection in this region and that possibly abdominal section would be necessary, and finding a mass in the right iliac region, I placed her in the knee-chest position and gave her a very large injection. After as much as possible had been injected, I had her sit on a jar. Not experiencing relief, I continued the injections while she was in this position, using flaxseed tea. This was continued for five or ten minutes. She was then put to bed and another large injection given. I then left her, and shortly afterward she got up and this huge gall stone was passed. (About the size of a hen's egg.)

Some twenty-five years ago my attention was directed to the method of treatment by olive oil by a lady from Cali-

fornia. I had seen her some time before in a debilitated condition from frequent attacks of biliary colic. I inquired the cause of the improvement, and she told me that she went with a friend to see a quack, who at once told her that she had gall-stones, and directed her to take half a pint of sweet oil in the evening, and to rub the right side frequently during the night, telling her that when her bowels were opened she would pass many gall-stones. It happened just as he said, and she had entire relief. Since then I have taken advantage of this hint.

I use the spirits of chloroform in combination with olive oil during the period of attack, and recommend that the oil be continued in doses of two tablespoonfuls before each meal, for a period of several weeks afterward. In this connection I recall to mind an amusing occurrence that happened in the army. A soldier was suddenly taken with biliary colic, and the assistant surgeon, an ignorant man, who had been promoted from the position of hospital steward, was called. He at once prepared a dose of chloroform, and taking it to the patient, said: "Take this; it may do you good or it may kill you; try it."

DR. JOHN C. DAcOSTA: My results with olive oil have not been so brilliant nor so quick as those reported in the paper. Opiates and chloroform will relieve the pain, but phosphate of soda does not seem to act as well as reported. Calomel between the attacks acts well; corrosive sublimate still better. One case will illustrate what I have to say. A hysterical woman has had at least five or six attacks in two years. I was disposed to think that all the attacks were not due to gall-stones until she brought me the stones which she had just passed. She was treated with olive oil in half pint doses. Since then she has had four or five attacks. In the last two she did not consult me until they were over. She takes half a pint of olive oil at one dose and lies down. In twelve or fourteen hours (not two or three as in some of the reported cases) she is relieved. The oil seems rather to lengthen the interval between the attacks.

DR. M. PRICE: The committee deserves great credit for its thorough investigation, but I cannot see the brilliant results referred to. In my experience I have not found the spasm of biliary colic to last many hours. How olive oil can relieve the pain, unless it is by a lubricating process, I can not understand. Many stones are of a soft, non-irritating nature; and if the spasm in the gall-duct is relieved, there

is no trouble ; the stone passes readily except when the duct is inflamed. Within a month I have seen two post-mortems. In one, a man, there were found two hundred and fifty gall-stones in the bladder. The man had never had an attack. In the other, that of an old lady with cancer of the kidney and a stone in the kidney, the gall-bladder contained five or six ounces of grumous fluid and a number of soft, gelatinous stones. She had never had any symptoms referable to the gall-bladder. There is another form of stone in which the treatment could be of no benefit, and that is in those hard ones which we see in cancer, and which in many cases, I think, are the cause of cancer of the liver. Where the stone is large and produces constant irritation there can be no possible benefit from any treatment except tremendous doses of morphia. The stones which I show you are hard and were removed by section.

The history of the cases reported is of this character. You prescribe a remedy to which the patient submits and endures the pain until the spasmodic period of the disease passes. Chloroform and morphia during the continuance of the spasm seems to be the only rational treatment.

In this whole series of cases, has there been a post-mortem? It is very difficult to say, when you have a patient suffering with spasmodic pain in the region of the gall-bladder, that it is due to gall-stones. Four or five years ago I saw a traveling minstrel who had had attack after attack, and had been treated by the best surgeons in the country for gall-stones. He had received olive oil and many other methods of treatment. I said to him there was no use of doing anything until we found out what was in the gall-bladder. I operated, and after breaking up adhesions reached the gall-bladder and found it perfectly healthy. The patient was completely relieved. His symptoms had simulated gall-stones so much that many surgeons wanted to open him for gall-stones.

In regard to cases of obstruction of the gall-duct. There are cases simulating gall-stones which are not relieved by medical treatment, but which could be relieved without trouble by abdominal section. It has been suggested by one of the best surgeons in this country to open the abdominal cavity and drain the gall-bladder, then to take a rubber ligature and unite the duodenum or ileum to the gall-bladder, and then with a whipped suture unite the peritoneum of the bowel to the peritoneum of the gall-bladder.

In the course of three or four days a fistula forms and then the abdominal opening can be closed with silkworm gut sutures, previously introduced. There is no question that gall-stones of the size that I have shown should be removed. It is my firm belief that gall-stones of this hard, irritating nature may in time produce malignant disease of the gall-bladder or of the gall duct.

I think with Dr. Mays, that the explanation of the benefit of olive oil, if it exerts any, is to be found in the lubricating and stimulating qualities of the oil, and that it relieves spasm simply by its purgative effect. I can not see otherwise where the benefit can come in. It has no solvent effect, and it can not remove a stone whose diameter is ten times that of the gall-duct.

DR. JAMES B. WALKER: In my experience, the question is not so much what will relieve the attack, as what will prevent its recurrence. If one would send out a series of questions in regard to the usefulness of any particular agent in gall-stones, would he not receive replies very similar to those given to-night? Take calomel, or any other agent which acts as a laxative, and it will terminate an attack of gall-stones, if it is a terminable attack. The question is, what will prevent recurrence? So far as this report goes, it seems to give to olive oil a favorable position as an agent for preventing recurrence. This is the most favorable report that I have seen. Still these are not exceptional results. We meet with cases of gall-stones where the attack is never repeated. Unquestionably, in many cases, the recurrences are due to the number of gall-stones. Sometimes, however, the attack terminates without the discharge of the stone, and yet there is no recurrence for months. I have a patient who recently passed a calculus, resembling a mulberry, both in shape and appearance; he passed this after a number of attacks under my observation. The attacks were treated with morphia and calomel, followed by phosphate of sodium and nitro-muriatic acid. After each attack there would be a return to health for a period. In at least ten attacks, the feces were examined without result. At times a detritus was found, looking like a crumbled stone. This was found in the last attack, and it was thought that the stone had crumbled and passed; however, the following day another severe attack occurred, in which blood was passed, and in the center of a clot of blood was found the calculus, as large

as the last joint of the index finger, and without facets. This was, unquestionably, the cause of all the trouble.

I believe that any laxative agent which will promote peristalsis and free biliary discharge will relieve the immediate attack if the stone can escape; then some agent to relieve the catarrh of the duodenum and the hepatic catarrh will be required. I have used olive oil in several cases, but my experience has not been satisfactory. The case just referred to received six ounces of olive oil on two occasions without benefit; other patients have received equal doses without success. The best remedy that I have found for old, recurring cases, where there seems to be an impacted stone, and where even cancer has been suspected, from the cachexia, is spirits of chloroform. In two cases, sisters, seen at intervals of five years, this seemed to be the agent that turned the tide of events after repeated efforts with other remedies. I gave it in teaspoonful doses three times a day. The cases immediately changed their character, the jaundice disappeared, and improvement in the general health took place. I believe the chloroform, which is known to increase the liquefaction of the bile, is of value in these cases; this, with phosphate of sodium, or some other sodium salt, or, where the patient is wealthy enough, a visit to the Carlsbad Springs. Here the waters are taken with a strict dietary for three weeks; when the patient is emaciated to a certain degree, he is sent to some other place for recuperation, to return for three successive years. This will often effect a cure. I have a patient who has been benefited by this course. After her return from the first visit to Carlsbad she had three attacks during the year; after the second she had two, and her general health was excellent. She is now returning from her third visit.

Dr. Streets, of the navy, has mentioned to me an interesting case where he used olive oil. The patient, a sailor, was seized with an attack of gall-stones, and was at once put upon the use of olive oil. The discharges were saved, and there were obtained a number of soft, pulpy bodies, which had a very odd appearance. They were somewhat globular, and not faceted. These were placed on a surface so that the oil could be absorbed, and they shrank in size, showing them to be faceted gall-stones. It seemed as though the oil had penetrated these in some way, either before or after leaving the biliary duct. They were, unquestionably, gall-stones.

DR. A. B. HIRSH: There is possibly one class of cases in which exception might be taken to Dr. Price's remarks in regard to having a remedy that would obviate future attacks; that is, those cases of distortion of the anatomy of the parts where no operation would avail. In the majority of cases of cholecystotomy we allow for drainage for some time, in the hope that the habit of inspissation of bile may be overcome. Those cases in which peritonitis is associated with resulting obstructive bands, and where, after closure of the fistula, the symptoms recur, are not satisfactory ones to deal with. I have met with several such cases, and in these any remedy that offers a promise even of relief should be welcomed.

In regard to the cases reported by practitioners who see but few, and then only at long intervals, there often remains some doubt as to the correctness of their diagnosis. Dr. Porter published in the *St. Louis Weekly Medical Review*, in the spring of 1889, a paper in which he analyzed a large number of such cases reported of supposed relief of gall-stones by the use of olive oil; he appeared to show that the treatment had no scientific basis; that the cases had not been followed sufficiently long, and that, if anything, the observers had been careless in taking notes.

DR. MAYS: I am here, perhaps, as the innocent champion of olive oil in the treatment of this disease. Having had some very favorable results from its action in three cases of gall-stones, I proposed the subject to the Polyclinic Medical Society for further investigation. From my own experience with it, I think that we ought to be very careful and not make any dogmatic statements concerning the action of this oil. Even if we do not know how an agent acts, we are warranted in ascribing some usefulness to it if it does the work which was intended it should perform, and especially if we were unable to accomplish this with anything else. I believe the cholagogue action of olive oil has been denied this evening, and in answer to this I would say that Rosenberg's experiments, which show its powerful influence on the biliary secretion, have been before the profession for at least a year and a half. Rutherford found that sodium salicylate was one of the best cholagogues, but the former demonstrated that the olive oil excelled the latter agent as a biliary stimulant. In view of this influence, it is easy to see how it acts in this disease, and it is also easy to

see how the sodium salicylate acts beneficially in similar cases.

Dr. Price seems inclined to doubt that the concretions, which are evacuated after the oil is administered, are true gall-stones. This is, of course, difficult to determine in many of the cases which are reported, but at least in one instance (Dr. D. D. Stewart's case) the concretions were examined by Dr. Leffmann, and by him pronounced true gall-stones.

I can hardly agree with the opinion of Dr. Walker that the sending out of inquiries concerning the action of any agent in the biliary colic would have brought similar favorable replies. There is too much unanimity, I may say, in the reports favorable to the action of the oil to give the least countenance to such a belief. Besides, we endeavored to guard against this very uncertainty. The circular asked expressly whether any other agents had been given, and with what results. In the great majority of cases all the known remedies had been tried, with doubtful results, or with failures. Many observers stated that no agents had given such signal relief as sweet oil.

If we believe in the efficacy of cholagogues to relieve the attacks of biliary colic, and are in search of an agent having a similar action to prevent their recurrence, then, I think, it is useless to advocate the action of chloroform in this disease, as has been done to-night. So far as I know, chloroform is not a cholagogue, but may act by relieving the spasm of the gall-ducts, and by having a solvent action on the calculi. I can more readily see how olive oil would prevent such recurrence, since it is one of the best stimulants to the hepatic secretion that we possess.—*Buffalo Med. and Surg. Journal.*

On the Local Treatment of Strangulated Hernia by Ether.

Dr. Finkelstein gave in 1882, from his own practice, sixty-three cases of strangulated hernia. Of these, five yielded to taxis. In fifty eight he employed "local etherization," taxis having failed, and of these fifty-eight cases fifty-four proved successful. Of the four unsuccessful cases two underwent surgical operations and two died refusing operative treatment. Since then he has had numerous successful cases reported from others and six in his own practice. (*Berlin Klin. Woch.*) As he remarks himself, the number

of cases is sufficiently great, and the successful results speak plainly enough to give his method a status in the practice of medicine—or, at all events, a more extended trial.

The method is simplicity itself. The patient is placed on his back, with the hips slightly raised and legs flexed, and then every ten minutes or a quarter of an hour a tablespoon of sulphuric ether is poured on the hernia-ring and tumor. The application of ether is carried on for, as a rule, from three-quarters to three hours (or even four hours) until the tense tumor relaxes and lessens a little. As soon as this occurs, and if the strangulated bowel does not reduce itself, several slight efforts are made to reduce it, and almost "always" it slips with a gurgle and amazing ease into the belly cavity.

If the omentum alone be strangulated, the ether method is absolutely useless. As the ether causes an after-feeling of heat and burning on the penis, labia, etc., Dr. Koch (American) protects these and other sensitive parts by previously smearing them with olive oil, and in addition covering them with pledgets of cotton wadding.

The ether seems to act thus. Richter, Velpeau, and others, hold that strangulation may in some cases be caused by spasm of the abdominal orifice. In these cases the ether may act by relaxing the spasm and thus reducing the bowel movable. That may be so, our author remarks, but he himself lays most stress on the property ether has of producing intense cold by rapid evaporation. The intense cold condenses the gas in the bowel, and by so doing diminishes its caliber. Possibly, also, the cold stimulates the peripheric nerves in the bowel sheath, and excites it to natural peristaltic action, which is more likely to empty it of gas, fluid and semi fluid contents than the rude manipulations in taxis.

Hence it follows the less the vitality of the bowel is impaired by taxis, the more successful will be the etherization process. The method certainly deserves a trial.—*Med. and Surg. Reporter.*

Weak eyes are always suggestive of total blindness. The *Medical Review* devotes a page to the subject and says: "Beware of the use of colored glasses as a cure of weakness of the eyes." It is well for druggists to remember this and not be too anxious for the sale of colored glasses to weak-eyed customers. Far better send them to a good physician.

Therapeutic Notes of Interest to Druggists.

BY H. M. WHELPLEY, M.D., PH.G.

Erysipelas is now treated extensively by a solution of one-half drachm of ichthyol to the ounce of collodion. Pilocarpus is given internally.

An ear-ache cure recommended by a German medical journal is made as follows:

℞	Chlorinated camphor,	.	.	.	5 pts.
	Glycerin,	.	.	.	30 "
	Oil of sweet almond,	.	.	.	10 "

Mix and moisten cotton and place in the ear.

Summer complaints in children are worthy of attention at this season. In speaking of bowel complaints, Dr. Hartfield says: "Strange as it may seem, such children often tolerate absolute suspension of feeding better than more robust children. This is an important point, as the parents of such children are apt to consider stomach feeding at frequent intervals a *sine qua non*. They should be assured that absolute abstinence from food is far better than pouring food into a digestive apparatus which is absolutely incapable of performing its normal functions. Complete rest of the stomach, supplemented by frequent tepid sponge baths and inunctions of cod-liver oil, will often accomplish wonders within a very few days."

"Keep water in the spittoon" are the five words employed by a French physician to name a preventive for consumption. When sputum from consumptives dries, it is blown in the air as dust and breathed by healthy persons and causes consumption.

The katzenjammer following a drunk is said to yield to the medicinal influence of resorcin. Give a teaspoonful of the following every half hour until relieved:

℞	Resorcin,	.	.	.	40 grains.
	Syrup of orange peel,	.	.	.	1 fluid ounce.

Mix.

Some tape-worms, like cunning old rats, manage to avoid all traps or poisons. The *Lancet Clinic* says the following will catch the oldest of them: "Fast one day, and on retiring take a couple of compound cathartic pills. The first

thing next morning take a dose of Rochelle salt, and after a complete watery stool take two or three ounces of cold decoction of pomegranate bark. If thrown up by the stomach, repeat the dose in a couple of hours."

Excessive sweating of the hands and feet is now treated with belladonna, which has long been known to be good for excessive secretions. The parts are to be washed two or three times a day with the following:

R_x Tincture of belladonna, . . . 4 fluid drachms.
Cologne water, . . . 4 fluid ounces.

Mix.

Venereal warts yield readily to the knife, but the method of treatment is not popular with the patient. Dr. Urviola paints the parts two or three times a day with the following:

R_x Salicylic acid, . . . 4 grains.
Acetic acid, . . . 1 fluid drachm.

Mix.

As a refreshing drink in fevers the following has been recommended:

R_x Tamarinds, . . . 4 ozs.
Raisins, . . . 4 ozs.
Water, . . . 6 pts.

Boiled down to 24 fl. oz. and strain while hot in a vessel with a little lemon peel to flavor. Use as a cold drink.

A good dusting powder according to the *Medical World* is made as follows:

R_x Soapstone, . . . } equal parts.
Oxide of zinc, . . . }

Mix.

It is used for bed-sores, infants, etc.

In order to administer small powders to infants, an ingenious physician proposes to wet the tip of the nurse's finger, get the powder on the moist spot and then wipe it on the baby's tongue while it attempts to suck the finger.

As a reliable enema in bowel troubles, Dr. C. P. Noble recommends the following:

R_x Sulphate of magnesium, . . . 2 ozs.
Glycerin, . . . 2 ozs.
Oil of turpentine, . . . 4 drs.
Water, . . . 2 ozs.

Mix.

An Address on the Pathology of Influenza, with Special Reference to its Neurotic Character *

BY JULIUS ALTHAUS, M.D., M.R.C.P. LOND.,

Senior Physician to the Hospital for Epilepsy and Paralysis, Regent's Park.

Mr. President and Gentlemen:—I purpose to show in this communication that the virus of influenza attacks primarily, not, as is generally believed, the mucous membranes of the respiratory tract, but the nervous system of the sufferer, through the agency of the blood; and that the symptoms of the feverish attack, as well as the sequels and complications of the disease, are owing to irritant poisoning of a definite portion of the nervous centers. The word "influenza" being somewhat long, and, as it appears to me, not very happily chosen, I have in the present paper frequently used the term "grip"—by which the disease is known in Germany and France, but spelt as an English word—as synonymous with influenza. I hope that this innovation may be generally accepted, not only because the term is short, but also because it graphically denotes the suddenness with which the disease attacks the patient. Another reason for accepting the term "grip" as equivalent to influenza is that it is really impossible to speak of the "influence of influenza," as one often feels tempted to do when talking or writing about it; while the "influence of grip" may pass muster anywhere. There can be no doubt that the epidemics of grip of the years 1889-91 have been the most interesting medical event of late years, and that they have taught us a great many lessons which we did not know before. Indeed, the disease, not having appeared in England in an epidemic or rather pandemic form for many years past, was unfamiliar to the present generation of practitioners, more especially as in numerous cases the signs of catarrh of the respiratory organs, commonly called "influenza cold," and which were generally believed to be characteristic of the complaint, were either slight or completely absent, the most striking symptoms of the distemper having been in the majority of cases a sharp and short attack of fever, great physical and mental prostration, and severe pain in the head, body and limbs, most or all of these symptoms ceasing as suddenly as they had appeared.

*Read before the Medical Society of London on November 2, 1891.

In accordance with our present views as to the mode in which infection takes place, I look upon the symptoms of influenza as owing to the action in the system of a special toxine secreted by a pathogenous bacillus. I regret to say that the results of numerous and laborious researches made by competent observers on the bacteria of grip flatly contradict each other, and that nothing is as yet known about the morphology of that micro organism, or about the chemical constitution of its poisonous secretion. All I feel it prudent to advance with regard to these points at present is that the life duration of the bacillus seems to be in the majority of cases a short one, inasmuch as the stage of incubation of the malady does not appear to last longer than two or three days, and the attack of the disease from two to fifteen days, while the patient may remain a focus of infection to others for about a week or ten days longer. On the other hand, the virulence of the toxine secreted by the parasite appears to be most remarkable, causing, more especially when it falls on a suitable soil, an immense variety of severe symptoms, not only during the primary attack, but also in many cases for a long time subsequently, leading not unfrequently to a fatal issue, or to such destructive lesions of important organs as to tend to disable the patient for life.

Why should the attack of grip end in some cases suddenly, with profuse perspiration and all the other symptoms of a crisis, leaving the patient weak, but really not much the worse for what he has gone through, while in other instances its course is much more protracted, and attended with dangerous complications and sequels? It appears to me that we can give a tolerably plausible answer to this question by reference to what takes place in pneumonia, which has been much better studied in this respect than grip. In pneumonia, as in most other infectious diseases, it is not so much the circulation in the blood of a special bacillus (Fraenkel's diplococcus), or the number of these micro-organisms, which kills, as the poison secreted by them. This poison, which has recently been isolated by Klemperer, causes the fever and the consolidation of one or several lobes of the lung, and endangers life by depressing the vital energy of the nervous centers of respiration and the heart's action. After this pneumo-toxine has circulated in the blood for a few days, an antidote to it—the anti-pneumo-toxine—is formed, by the aid of the poison itself, in the serum of the patient, and neutralizes the poison so as to render the serum innocuous,

when there is a crisis, and the patient recovers either completely or incompletely, according to the quantity of the anti-toxine which may have been formed.

Let us now apply the results of these researches to influenza, which appears justifiable on account of the similarity of the morbid processes in the two diseases. I assume, then, that the patient having acquired infection, a poisonous albuminoid secreted by a special pathogenous bacillus, and which I will call the *grippe-toxine*, circulates in the blood, and causes the special symptoms of the feverish attack. In a day or two, however, an antidote, which I will call the *anti-grippe-toxine*, is formed in the serum of the patient. Now let us suppose the quantity of this antidote to be in a given case sufficient for neutralizing all the poison which is circulating in the blood; and there will be a crisis, with a sudden fall of temperature, profuse perspiration, and relief to the distressing subjective symptoms. If, however, the quantity of the antidote should be too small to neutralize all the toxine which may be present, the course of the disease will be protracted; there will only be a pseudo-crisis, and complications and sequels of different kinds will follow. By the aid of this theory we may also explain why *immunity* which has been acquired by a patient may subsequently be lost again. Let us suppose that all the anti-grippe-toxine which has been formed in the serum has been lost, and that the patient is again exposed to infection. A second, or even a third, attack of grip may then take place in the same individual, just as we meet occasionally with a second or third attack of measles, pneumonia or rheumatic fever in the same patient. The theory which I have just proposed appears, therefore, to explain satisfactorily— 1) why patients acquire influenza; (2) why they recover from it, either perfectly or imperfectly; and (3) why, after having had it once, they may contract it again a second or third time.

I now proceed to the next portion of my subject, which is to show that all the symptoms of the feverish attack of influenza are referable to irritant poisoning of a definite center of the nervous system. Let me first show you the steps by which I have arrived at this opinion. Shortly after the visitation of influenza had commenced, I was surprised to see, both in hospital and private practice, a number of patients complaining of severe forms of neuralgia, loss of power, and a general break-up of the nervous system, which they attributed to an attack of grip which they had recently passed

through. Some of these patients had been in perfect health before, so that the grip appeared to be the *fons et origo mali* altogether; while in others a neurotic pedigree or a previous syphilitic infection, or some other constitutional fault, could be clearly traced, upon which the subsequent nervous affection had, as it were, been grafted. I also found that the number of nervous sequels which appeared after influenza was largely in excess of other post-febrile neuroses, of which I had seen numerous examples in the course of my practice. In comparing those nervous troubles which may be met with after such diseases as diphtheria, typhoid fever, scarlatina, smallpox, measles, erysipelas and malaria with those seen after influenza, none of them—nor, indeed, all of them put together—approached in number the nervous sequels of grip. This I attributed to the circumstance that more than half the population of the country had lately been down with influenza, while the number of patients suffering at any one period from other fevers is always very much less. There was, however, also a much greater variety in the nature of post-grippal neuroses perceptible than in others, which run in comparatively narrow grooves. Indeed, it soon became evident that as a powerful etiological factor of all kinds and forms of nerve disease influenza stands *facile princeps* among all infectious fevers. The only distemper which approaches grip in this particular quality is syphilis, which may also give rise to the symptoms of almost any nervous disease. I find a still further analogy between these two infectious diseases in the circumstance that in both we may have a primary attack, secondary symptoms of a comparatively mild character soon afterward, and tertiary affections of a more dangerous and obstinate nature, affecting the organic structure of tissues, at a more remote period. Grip also seems occasionally to revive an old syphilitic infection which has lain dormant in the system for years, and thus indirectly to give rise to certain diseases of the spinal cord, which are known to occur habitually on a syphilitic base. In comparing the degree of virulence of the two poisons, however, I have found that when the grippo-toxine attacks the structure of organs, it often does so with far greater ferocity, and in a more ruthless manner, than the syphilitic virus. Thus we see sometimes incurable blindness from optic atrophy, spastic spinal paralysis, and general paralysis of the insane becoming fully developed in a few days, weeks or months from the outbreak of the feverish attack; while these diseases, when ow-

ing to syphilis, take years to become fully developed, and are also more amenable to treatment. When I had once realized this extraordinary tendency of grip to be followed by nervous sequels of almost any description, it was only a short step to the further inquiry whether the chief reason of this peculiarity might not be found in the circumstance that the distemper itself, in its primary manifestations, is not so much an infectious catarrhal fever, as has been generally assumed, as an infectious nervous fever. A clinical survey of the symptoms of the feverish attack rendered this, *prima facie*, not unlikely; as many of them, such as headache, utter prostration of mental and bodily strength, delirium, coma, convulsions, etc., point unmistakably to the nervous system as their starting-point; while, on the other hand, catarrh of the mucous membranes and pneumonia have been completely absent in a large proportion of cases. Indeed, many patients have had influenza badly without having once coughed or sneezed.

The great varieties observed in the symptoms of the feverish attack of grip have induced a number of observers to assume three different forms of the disease, viz.: the nervous, catarrhal and gastric variety. I wish, however, to impress upon you most strongly what I am convinced to be the fact, viz.: that these three forms have not any different pathological characters, but that influenza is always a true nervous fever, the symptoms of which only differ as far as localization of the grippo-toxine in different areas of the nervous system is concerned, and that the three forms just mentioned are perfectly arbitrary, however much sanctioned by authority. I shall therefore now endeavor to prove to you that the first or nervous form is that in which we have to do with the effects of the grippo-toxine upon the thermolytic, cardiac and other centers of the medulla oblongata; that in the second or catarrhal form the special nervous mechanisms formed by the fifth pair and the vago-accessory nerves which supply the mucous membranes of the respiratory tract are suffering; and that in the third or gastric form the symptoms are owing to poisoning of those portions of the nuclei and branches of the pneumogastric nerves which supply the abdominal viscera, with occasional extension of the shock to the sphere of the splanchnic nerves, which constitute a vasomotor center for the whole abdominal cavity, and which anastomose with the pneumogastric in the celiac plexus.

Nervous Form of Influenza.—One of the most important symptoms of this variety of grip is the fever, which shows considerable peculiarities. But before discussing this let me ask the question, Are there any afebrile cases of influenza? Time will not allow me to enter further into this matter except to say that I have seen a number of cases of what I fully believe to be chronic infection of the nervous system with grippo-toxine, the principal symptom being intense mental depression, which may lead to suicide. Of the peculiarities of the fever of grip, I will in this place only state that there is no parallelism between the degree of temperature and the severity of the illness, as is the case in the eruptive fevers and other acute diseases, and that it is therefore unimportant from a prognostic point of view. How is the fever to be explained by the neurotic theory of grip? Most pathologists hold at the present day the doctrine that the fever heat is owing to increased production of heat, which is caused by irritation of the thermogenetic center in the caudate nucleus. I have, however, long been of opinion that the opposite contention first put forward by Traube is nearer the truth, viz.: that the fever heat is owing to increased retention of heat or diminished loss of it. This theory has quite recently received considerable support from the experiments of Rosenthal, of Erlangen, which appear to have been very carefully made; and I would therefore explain the fever heat in grip by congestion of the thermolytic center in the bulb, which regulates the loss of heat which is constantly taking place through the skin and lungs, and which includes for this purpose the vaso-constrictor center which presides over the action of the blood-vessels of the skin, the sudoriparous center which controls the action of the sweat glands, and the respiratory center which regulates the movements of the lungs (Hale White). As long as this thermolytic center continues to be irritated by the grippo-toxine circulating in the blood, the fever continues; but as soon as so much antitoxine has been formed in the serum as is required for neutralizing the action of the toxine, there is a crisis, with a sudden fall of temperature, profuse diaphoresis, loss of heat through the skin and lungs, tendency to sleep, and relief of all subjective symptoms.

I have just referred the fever of grip to congestion of the thermolytic center in the bulb. Indeed, no one who has watched and considered the clinical symptoms of the feverish attack of grip will deny that congestion must be looked

upon as the principal pathological process which is at work during that time in the system. It is true that the symptoms are often so severe as to indicate at first sight inflammation. More especially in children, grip begins sometimes with what looks like symptoms of meningitis. There is intense headache, vomiting, constipation, grinding of teeth, rigidity of the neck, convulsions, delirium and coma; yet the sudden defervescence of the most alarming signs, which may be noticed twenty-four or thirty-six hours after their commencement, renders it certain that there can have been no inflammation or effusion, which require a much longer time for their resolution or absorption. Congestion, on the contrary, we know to be liable to very sudden modifications and variations under the influence of various agents, or after the cessation of certain causes. This opinion is also supported by the fact that in cases which looked like meningitis a sudden improvement has often ensued in consequence of profuse epistaxis setting in. Moreover, we actually see congestion in that suffusion of the conjunctiva and swelling of the eyelids which are met with almost invariably in grip. Inflammation, however, does occasionally occur in various organs when the irritation of the vaso-constrictor center in the bulb reaches a very high degree. Thus we see meningitis (Fraser, Mackay), cerebral abscess (Bristowe), and a variety of other inflammatory affections, such as otitis, glossitis, keratitis, optic neuritis, endocarditis and myocarditis, nephritis, orchitis, etc. While I explain the occurrence of most of these inflammations by excessive irritation of the vaso-constrictor center in the bulb, some of the more specific inflammations which are also liable to happen, such as erysipelas and pneumonia, in which special bacteria are known to be the exciting agents, are more probably owing to the loss of the power of phagocytosis in consequence of the illness. Microbes, which in health are habitually destroyed by the leucocytes as soon as they appear at the entrance gates of the system—*quærentes quem devorent*—are then readily admitted and allowed to multiply in the blood, with the result of causing specific inflammations.—*Lancet*, November 14, 1891.

Night sweats have been treated with eight-grain doses of tellurate of sodium given at night.

The Etiology and Treatment of Puerperal Eclampsia.

There is no acute disease which should demand greater consideration, as regards pathology and treatment, than puerperal eclampsia. In support of this assertion it is only necessary to refer to the high mortality (both to mother and child), the alarming suddenness of its onset very frequently, and the fact that the mind of the profession is by no means made up regarding the causation of this grave affection and the best means with which to combat it.

In 1842 Lever discovered that in the great majority of cases of puerperal eclampsia, albumin is present in the urine, and since that time the condition of the kidneys has been considered one of the most important factors in its etiology.

At the annual meeting of the British Medical Association, a most interesting discussion was held upon this subject by several prominent English obstetricians, and it may be of interest to briefly review some of the opinions expressed, since, from the high professional status of the assemblage, their utterances must be regarded as more or less authoritative. The causation of puerperal convulsions has been a rich field for discussion, and, with the increasing number of theories advanced during late years, it would seem that, in the present state of our knowledge, definite conclusions are as far away as ever. This difficulty is, however, more apparent than real, for a careful study of the whole subject seems convincing that much light has been thrown upon both pathology and treatment by the carefully recorded clinical observations and experimental studies which have been made. A great deal of valuable negative knowledge is available, and also much that is positive, confirmed by repeated bedside experiences.

At the meeting already referred to (Annual Meeting Brit. Med. Ass'n, Section of Obstetric Medicine, Bournemouth, July, 1891), the etiology of puerperal eclampsia was discussed in three divisions, as follows:

I. The causation of that form of albuminuria which is associated with eclampsia.

II. The relation between the albuminuria and the convulsions.

III. The explanation of those cases in which the urine is at first free from albumin, and the albuminuria only appears

after the convulsions; also of the exceptional cases in which albuminuria is absent throughout.

Regarding the first question, or the causation of the albuminuria so frequently present in such cases, Dr. Galabin referred to the theory of Dr. Blane, of Lyons, who has isolated a specific bacillus from the urine of patients having puerperal eclampsia, which he regards as the primary cause of both the convulsive phenomena and the kidney lesion. In support of this theory Dr. Blane found that the injection of pure cultures of his bacillus into pregnant rabbits was followed by eclampsia, dyspnœa, and death; while in non-pregnant rabbits only local inflammation was produced at the point of injection. Therefore, Dr. Blane has reasoned, the bacillus is the primary cause, and that a poison is developed within the body which produces convulsions and nephritis by direct action upon the nervous centers and the kidneys. Dr. Galabin rejects this theory from lack of proof and because it would render puerperal convulsions a zymotic affection to which only pregnant women and rabbits are liable, and he prefers to believe in the uræmic origin of the eclampsia, even if the production of the nephritis can not at present be satisfactorily explained. As powerful predisposing causes of albuminuria in primiparæ, he mentioned the increased intra-abdominal pressure of pregnancy which interferes with the renal circulation, and also the depressed state of the nervous system so often attendant upon a first confinement. Dr. John W. Byers referred to the paper of Leyden (*Deutsch. Med. Wochenschrift*, March 4, 1886), who considers the kidney lesion, associated with puerperal eclampsia, as a special form of nephritis, due to prolonged arterial anæmia, the primary causes of which, he thinks, is the altered intra-abdominal pressure.

Another interesting theory regarding the cause of albuminuria is that proposed by Stumpf, which is that a toxic nitrogenous product, probably acetone, is developed in the blood, and this in its elimination gives rise to nephritis. Other theories as to the origin of the kidney lesion of puerperal eclampsia are not wanting, and Dr. Braxton Hicks has advanced the view that the convulsions themselves cause the albuminuria. Santos attributes it to the strain and consequent irritation of the uterine nerves during the enlargement of the uterus, and that this acts reflexly upon the sympathetic and renal nerves, producing the convulsions and the albuminuria. Winckel conjectures the existence of

several poisons which develop and act with varying intensity. Pagot considers the fits reflex, the nervous discharge occurring from the cerebro-spinal center close to the albuminuric center. The Traube-Rosenstein view is that the convulsions depend upon cerebral anæmia due to œdema of the brain which is caused by the hypertrophied heart of pregnancy pumping watery blood under high pressure.

Enough has been said to prove that there is complete want of agreement among the highest authorities concerning the importance of, and the cause producing, the albuminuria of puerperal eclampsia, and Byers undoubtedly states it truly when he says: "I do not think we are yet in a position to give a dogmatic answer to such a question."

There is far more unanimity of opinion concerning the second part of discussion, viz.: "The relation between the albuminuria and the convulsions." The weight of opinion seems to be, that when albuminuria is present it is usually associated with a diminution of the amount of urine, or the solids of the urine, and that the convulsions are due to the retention in the blood of certain toxic substances; while in those cases in which albuminuria is absent, the convulsions are simply epileptic, or are due to reflex irritation from the uterus, acting upon an excitable nervous organization.

Those cases in which albuminuria only appears after the occurrence of one or more convulsions, have been explained by the theory that the kidney lesion in such cases is a pre-albuminuric nephritis—in other words, that the portion of the kidney which has to do with the transudation of albumen becomes affected last, and to this fact the late appearance of albumen in the urine is due.

Dr. Auvard, of Paris, has made a special study of eclampsia, and has formulated what he terms the "pathogenic theory," which is that puerperal convulsions result from a poisoned condition of the blood, due to diminished elimination by the liver and kidneys. His own words are: "To sum up: the pathogenic theory views eclampsia as the result of a 'strike' on the part of the organs of elimination, giving rise to intoxication of the organism."

The treatment of puerperal eclampsia is of far greater importance in the present state of our knowledge than speculations regarding the multitude of theories which have been brought forward to account for the disease. This, of course, is modified largely by the severity of the attack, and the time at which it occurs. It is now well known that the mortality

is higher when the convulsions appear during pregnancy than when they begin during labor, and that the prognosis is more favorable still if the convulsions begin after labor. Those cases in which the convulsive seizures begin early in labor are more fatal than when they begin in the last stages of labor. Statistics also show that the convulsions cease in one-third of all cases when the uterus is emptied, so it is not surprising that the induction of premature labor occupies such a prominent place in the treatment of cases occurring during pregnancy, and that rapid delivery is of so much importance when convulsions appear early in labor. Auvard, whose theory of the pathogenesis of puerperal eclampsia has already been stated, also sums up its treatment as follows: "The therapeusis of eclampsia comprises the threefold indication to favor elimination by means of purgatives, diuretics, and diaphoretics; and the threefold indication of sedation by means of anæsthetics, venesection, and by emptying the uterus." Winckel, in his recently published text-book, says: "Whenever the patient becomes restless, and the approach of an attack is thereby recognized, or as soon as the first contractions commence, chloroform is to be given, and the inhalation to be continued until the attack disappears. The chloroform acts, therefore, as a preliminary calmative until the chloral can be given (1 to 2 grammes=15-30 grs.), which is at once to be administered per enema, after each attack, and we are not afraid of giving as much as 12 grammes (=3 drachms) of the drug per day, and even more." Winckel's record is ninety-two cases with seven deaths. Dr. Byers' treatment is chloroform and chloral, with rapid delivery if the case does not yield to these remedies. Another set of equally prominent clinicians rely upon venesection first, followed, if necessary, by chloroform anæsthesia and chloral, and thirdly, delivery, if indicated. Other remedies in common use are morphine, pilocarpine, nitroglycerine, amyl nitrite, veratrum viride hypodermically, the bromides, and brisk purgatives when the patient can swallow. Since every grade of severity of the convulsions occurs, it is impossible that any one treatment is applicable to all cases, and the time at which eclampsia appears, the condition and habit of the patient, the state of the urine, and the amount of albumin present, should guide us in deciding the treatment of each case.—*Med. and Surg. Reporter.*

Diphtheria Contracted from Animals.

BY J. LEWIS SMITH, M.D., NEW YORK (BELLEVUE HOSPITAL).

It is now known that several animals, even those that are pets of the nursery, are liable to be attacked by diphtheria. Indeed, this has been proven, as we have seen in the laboratories; for bacteriologists, investigating the nature of diphtheria, have in numberless instances communicated the genuine disease to animals, by inoculating them with cultures of the Klebs-Löffler bacillus. It is very important that parents should know that milk, the common food of the nursery, is a culture medium of the diphtheritic germ. The specific bacillus falling into the milk in the handling at the farm-house or elsewhere grows and multiplies in it. Mr. Cole, a veterinary surgeon of Australia, published in the *Australian Veterinary Journal*, February, 1882, the history of an epidemic of diphtheria that was traced to the use of milk from a diseased cow. The London *Medical Times and Gazette* for January, 1879, states that Mr. W. H. Power, a health inspector, investigated an outbreak of diphtheria, and obtained sufficient evidence, in his opinion, that it was caused by the use of milk that contained the diphtheritic germs. The cows that furnished the milk had what the veterinary surgeons designate garget, or infectious mammitis. The history of another similar epidemic is related in the same journal.

In the *Deutsche Zeitschrift für Thiermedizin*, 1877, Professor Dammann, of the Hanover Veterinary School, reports an epidemic in calves that was diagnosticated diphtheria. He directed the attendant to make applications to the throats of the sick calves. This was on April 29. On May 5, the attendant became sick, complained of his throat, and was confined to bed. A grayish-white patch of pseudo-membrane appeared upon his tonsils, which were highly inflamed. He had fever and enlargement of both sub-maxillary and cervical glands. The dairymaid, who now took charge of the calves, also had a similar but less severe attack.

The *Occidental Medical Times* for July, 1890, publishes an interesting and instructive paper by Dr. E. Klein, the well-known bacteriologist of London. He states that he inoculated two cows upon the shoulder with the diphtheritic virus. The inoculation was followed by the occurrence of vesicles and pustules upon their udders, and microbes were

found in the milk. Two calves were inoculated with the matter taken from the vesicles and pustules, and similar eruptions were produced in them, followed by bronchopneumonia, and fatty kidneys, such as occurred in the cows. Two cats fed with the milk from the cows, sickened with feline diphtheria, and this was followed by an epidemic among the cats kept for experimental purposes in the laboratory. Fourteen sickened with it, some of them dying. It is evident from the above observations and facts, that the utmost pains should be taken to obtain milk designed for the nursery, from a healthy source, and to prevent its subsequent infection. We may also anticipate our remarks on the prevention of diphtheria by stating that milk designed for the nursery should always be subjected to the prolonged action of heat near the boiling-point, which destroys all pathogenic germs. I invariably direct that it be steamed in or over boiling water, two hours, as soon as possible after its reception.

Klein has made experiments showing the identity of feline and human diphtheria, though diphtheria in the cat presents some anatomical characters different from those in man, and the following observations appear to show that it is sometimes communicated by this pet of the nursery to the children that fondle it. The *Medical Press and Circular*, June 4, 1890, states that Dr. Lawrence reports two cases under his care in which diphtheria seems to have been communicated by cats. In the first case, that of a little girl, a careful inquiry showed that she had not been exposed to any patient with diphtheria, although this disease was prevailing within a mile of the patient's residence, but that she had nursed a sick cat some days previously. The cat died soon after, and a second cat became sick and was killed. Further inquiry disclosed the fact that a neighboring farmer had lost seventeen cats, and another farmer fifteen cats, from a throat distemper. One of the farmers stated that he had examined the throats of some of the cats, and found them covered with a white membrane. Dr. Bruce Low, in a report to the Local Government Board, states that a little boy at Enfield had fatal diphtheria, and vomited on the first day of his sickness. A cat licked the vomited matter from the floor, and soon after the boy's death it was noticed to be sick, and its sufferings and symptoms so closely resembled those of the dead boy that it was destroyed by its owner. During the first part of its sickness it frequently went to the rear

yard, which was frequented by cats, and a few days subsequently the cat of a near neighbor was observed to be sick. The second cat was nursed during its sickness by three little girls, all of whom took diphtheria.

P. C. Coleman, of Colorado, Tex., states that after a residence of five years at Colorado, he saw the first case of diphtheria. A child of four years, living thirty miles distant in the country, and with no neighbor within six miles, had diphtheria followed by paralysis. The child was far away from any source of human contagion, and had rarely seen other children. The father stated that two kittens had recently died from what seemed to be the same disease, and the child had frequently kissed them. Dr. Coleman does not doubt that the diphtheria was contracted from them. Dr. George Turner states that a cat fed with the refuse food of some children sick with diphtheria, also suffered severely with what seemed to be the same disease. Dr. A. Jacobi relates the following example: Three kittens were allowed to remain with five children sick with diphtheria. The kittens sickened and died, and a post-mortem examination revealed the presence of the diphtheritic pseudo-membrane in their throats. Cats travel from house to house, often congregate, and are petted by children, so that they are likely to communicate any contagious disease which it is possible for them to contract. It appears from the above observations that they have communicated diphtheria in some instances in which its origin was obscure.

Observations show that the feathered tribe are especially liable to diphtheria. On the island of Skiathos, off the northeastern coast of Greece, no diphtheria had occurred during at least thirty years previous to 1884, according to Dr. Bild, the medical practitioner of the island. In 1884 a dozen turkeys were introduced from Salonica. Two of them were sick at the time, and died soon afterward. The others became affected soon afterward, and of the whole number, seven died, three recovered, and two were sick at the time of the inquiry. These two had difficult breathing, swelling of the glands of the neck, and a pseudo-membrane extending to the larynx. As further evidence that the disease was diphtheria, one of the turkeys that survived had paralysis of the feet. The turkeys were in a garden upon the north side of the town, and the prevailing winds upon the island are from the north. When this sickness was occurring among the turkeys, an epidemic of diphtheria commenced in the

houses in proximity to the garden, and spread through the town. It lasted five months, and of 125 individuals attacked by diphtheria in a population of 4,000, thirty-six died. From this time diphtheria has been established on the island, and frequent epidemics of it have since occurred.

According to M. Menzies, diphtheria is common among the poultry of Italy, in which country the flat roofs of the houses afford a resting-place for turkeys, fowls, pigeons and rabbits, whose evacuations are carried by the rains into the cisterns and wells. A physician at Posilippo, near Naples, had directed his servant not to obtain drinking-water from the well next to his house, but from a well at a distance. As long as the instruction was obeyed, the family was well; but the indolent servant disobeyed the command, and obtained water from the infected well. Four of the children who drank this water soon contracted diphtheria, and died. The fifth child, who did not drink the water, escaped. Among the writers who have related instances showing the transmission of diphtheria from the feathered tribe to man, may be mentioned Nicatè, of Marseilles, and Dr. Delthel. In the *American Practitioner and News*, Dr. F. T. Wheeler states that while in a nesting of wild pigeons he found many sick with a pseudo-membranous sore throat. He dissected some of them with his pocket-knife, which he was obliged to throw away on account of its offensive odor. There were millions of pigeons in the nesting, and they were hunted and eaten by the inhabitants, among whom diphtheria broke out, fatal to many of the children. Several years previously there was a similar nesting of pigeons near by, and fully half of the children had diphtheria. In the *Journal of Laryngology and Rhinology*, Dr. George Turner states that a pigeon that had died of the throat distemper was brought to him for dissection, and he found a pseudo-membrane covering the whole windpipe. With this he inoculated other pigeons, and produced in them a similar disease, which extended up the nostrils to their eyes.

Dr. Turner also states that an epidemic of diphtheria broke out in the village of Braughing, Hertfordshire, England, the first cases occurring on a farm where the fowls were dying of a disease similar to that in the pigeon, and on other farms where the children had diphtheria, a similar malady of the fowls prevailed. At Longham a man bought a chicken at a low price, as it was sick with the prevailing disease, and cared for it at home. His children soon sickened with diphtheria, which extended from his family

through the village. Dr. Turner mentions similar instances, showing that the feathered tribe, the common barn-yard fowl, turkeys, pigeons, and in one locality pheasants, died of a disease attended by a pseudo-membranous exudation, which was probably diphtheritic.

There is, therefore, sufficient evidence that diphtheria is not only communicated from person to person like other contagious diseases, but that it is often communicated by cases so mild that they go abroad and mingle with other children. It is evident, also, that the specific principle of diphtheria, to wit, the Klebs-Löffler bacillus, often adheres to objects for months and years, rendering them infectious, that several of the domestic animals are liable to diphtheria, and that there can be little doubt that epidemics of this fatal disease of obscure origin have repeatedly originated from these animals. These facts in reference to the causation of diphtheria, show in what ways this scourge of modern society, conveyed to commerce and travel, has encircled the globe, and how it has become established, or endemic, in all or nearly all the cities in both hemispheres.—*Monthly San. Record.*

Cataphoretic Treatment of Goitre by Iodine; of Chronic Orchitis; of Uterine Fibroids, etc.

BY HUNTER M'GUIRE, M.D., LL.D.,

Ex-President Southern Surgical and Gynecological Society, etc.

About six months ago, Dr. Waite, of the firm of Waite & Bartlett, of New York City, gave me a cup-shaped electrode, and demonstrated to me the fact that, by its proper use with a galvanic battery, a solution of muriate of cocaine could be driven into the skin and complete local anæsthesia produced. A small piece of absorbent cotton, or a piece of blotting paper, saturated with the solution of cocaine, was put into the shallow cup of the instrument, and the electrode attached to the positive pole of the battery. The electrode was then placed upon the skin where the insensibility of anæsthesia was desired, and the sponge on the wire joined to the negative pole was placed on some convenient neighboring part.

It required a current of four or five milliamperes to drive the cocaine through the skin and make the anæsthesia complete—the insensibility extending for some distance below the surface of the skin.

A day or two after the above demonstration was made to me, about January 10 of this year, a case of enlargement of the thyroid gland came into the hospital (St. Luke's). The goitre was bilateral, old, very large, hard, and seriously interfered with respiration. It had resisted for years the ordinary treatment of such growths. Internally, iodide of potash, iron and mercury had been faithfully tried; and, externally, at different times, iodine and biniode of mercury frequently used. The goitre steadily grew; and, lately, its increase was so rapid that the lady, in great alarm, came to me to ask for some surgical operation. She had spasmodic attacks of palpitation of the heart; frequent spells of giddiness or vertigo, but no ocular protrusion.

Instead of attempting the removal of the gland, I determined to use iodine in the cup-shaped electrode, and see what effect it would have on the growth. I put in the cup of the electrode some absorbent cotton first dipped in water and squeezed as dry as I could get it; and on this cotton I poured ten or fifteen drops of tincture of iodine. The electrode, thus prepared, was placed on the most prominent part of the goitre—the negative pole on the back of her neck. The galvanic current was then turned on until the milliamperemeter showed the strength to be six or eight. This current was kept up for ten minutes. While using it, she told me she tasted the iodine—and afterwards that this metallic taste in her throat lasted for hours.

When the electrode was removed, the cotton was found simply stained with the iodine, but most of the iodine had disappeared.

I repeated this application of iodine and electricity every day for three weeks. Not always, but nearly every time, she said she tasted the iodine, and said that this was the most disagreeable part of the treatment. The tumor gradually grew smaller—at first quite rapidly, but afterward more slowly—getting more and more indurated as it contracted. The cardiac and cerebral symptoms disappeared completely.

This patient, after three weeks, was called home by the illness of her child, and did not come back for a month. The goitre, however, continued to decrease while she was absent. When she returned, the applications were again made daily for three weeks. The gland was reduced to about one-fifth of the size it was when the treatment was begun, and, in spite of all further use of the remedy, remained stationary. But all of the subjective symptoms were gone, and the lady left me in excellent health.

Two other cases of chronic goitre have been treated in the same way, and with the same results—the hypertrophy diminishing, rapidly at first, then more slowly, then reaching a point when it became stationary.

In four cases of recent hypertrophy of the thyroid gland in young women, the enlargement rapidly disappeared under the use of this measure.

Iodine and electricity have, of course, been long used for goitre. How much of the good I have obtained is due to one or the other of these agents, I don't know.

Lately in a case of pronounced exophthalmic goitre I used this treatment with quite rapid diminution of the enlarged thyroid gland, and a decided amelioration of the other symptoms. The tendency to syncope and dizziness was lessened and pulsation of the arteries diminished, but no perceptible change in the ocular protrusion resulted. The case is too recent, however, to report.

In several cases of chronic inflammatory enlargements of other parts, I have used this measure with very positive good. In a case of chronic orchitis, it acted promptly and decidedly.

The treatment of fibroid tumors of the uterus by electricity, after the manner of Apostoli, is used by many surgeons. No one who has tried it faithfully and patiently can have any doubt of its great value in very many cases. For several years I have used it, and with great good. Lately, when I could reach the tumor through the vagina, I have used iodine after the plan just reported, letting the current go as high as ten milliamperes only. I have obtained very positive good in this way, and without pain to the patient. Under its use the bleeding will cease, the pain disappear, and the tumor grow smaller, just as well as when the electrode is introduced into the cavity of the wound, and the current made as strong as one hundred to two hundred milliamperes.

I am having constructed now a small electrode, to see if hypertrophy of the tonsils can not be reduced in this way. Of course, if it is valuable, it can be used in a great variety of ways and for many purposes.

I have made some experiments with other medicines, but have not gone far enough to make any report.

If fluid medicated agents can be sent in this way into a growth, would it not be well to try this method of treatment in cancer in its early stages?—*Va. Med. Monthly.*

Microscopy.

Proceedings of the San Francisco Microscopical Society.

Reported for the CINCINNATI MEDICAL NEWS by Wm. E. Loy, Esq., Recording Secretary.

The meeting of the San Francisco Microscopical Society was held at its rooms, October 21. After the transaction of the usual business, the meeting resolved itself into an exhibition, with brief verbal communications pertaining to the objects exhibited.

Dr. Douglass W. Montgomery recalled the case of *Acromegalia*, which resulted in the death of the Italian peanut vender at the Almshouse about two months ago. He exhibited a series of slides, with different stains, showing *corpora amylacea*, or amylaceous bodies, found in the prostate gland. The doctor briefly described the development of the disease and illustrated the structure of the amylaceous bodies, which in the slide exhibited were stained with *hæmatoxylin*. His remarks called forth considerable discussion, and questions and answers followed, showing that his hearers were deeply interested.

Dr. C. E. Cooper exhibited a slide prepared from the sputum of a patient who had received twenty-five treatments of Koch's *tuberculinum*, in which the *bacilli*, instead of presenting the usual rod-like appearance, were broken up into little dots or nodules.

Ed. M. Ehrhorn exhibited some very interesting objects, chiefly scale insects, their enemies and parasites. He showed the voracious cottony-cushion scale, *Icerya purchasi*, from eggs to imago, together with its natural enemy, *Vedalia cardinalis*, or Australian lady-bug. He also exhibited other noxious insects, as the red scale, the San José scale, and their parasites.

Henry C. Hyde exhibited and explained the various methods of measuring microscopic objects, and for the purpose had a stage micrometer, Jackson's micrometer eyepiece, and the *camera lucida*. A. H. Breckenfeld exhibited a splendid specimen of *Hydra vulgaris*, with dark-field illumination, and called attention to the poison glands, by the aid of which its prey is rendered powerless. L. M.

King exhibited a drop of water, with a remarkably fine gathering of *paramecium*.

Charles C. Riedy had under a one-twentieth immersion lens the diatom *Coscinodiscus asteromphalos*, showing the secondary markings beautifully. He had also a photograph of the same diatom, recently made by Nelson, of London, which had called forth considerable comment at a recent meeting of the Royal Microscopical Society in London. The image shown last night was considered fully equal to the photograph. S. E. Taylor had a very fine frustule of *Suriella gemma*, shown with a one-twelfth objective, immersion contact. Altogether the meeting proved an unusually pleasant and instructive one.

MEETING OF OCTOBER 28.—At the meeting of the Microscopical Society held October 28, Kaspar Pischl, M.D., read a short paper and exhibited a slide of *Gonococci* from a case of *Ophthalmia neonatorum*. Much of the paper was of a technical character, but the doctor mentioned that of the totally blind in Europe statistics proved that fully one-third was caused by *Ophthalmia neonatorum*. The remedy is so simple and so efficacious, when treated in its early stages, that in most European countries laws have been passed making it compulsory on nurses to report any inflammation of the eye in infants to the designated authorities within six hours. He said a two per cent. solution of nitrate of silver would cure ninety per cent. of the infants thus afflicted. Thus far no concerted movement has been made in this direction in any State except New York, where a law has been passed similar in its provisions to laws in various European countries. Dr. Pischl thought it would be a great boon to the people of California to have a similar law enacted, and he hoped to see united action on the part of the medical profession.

F. O. Jacobs, of Columbus, O., was present as a visitor, and favored the society with a description and drawing of a freezing microtome which he had designed and constructed. In the different forms of freezing microtome employed, great difficulty is experienced in keeping the mass in a congealed state, unless one operates in an atmosphere at a low temperature; while the one designed by Mr. Jacobs works very satisfactorily in the temperature of an ordinary room or laboratory.

Dr. Mouser showed some agar he had prepared of such

pure transparency that cultures could be perfectly photographed *in situ*. The tube shown had a fine colony of *anthrax bacillus*.

Henry C. Hyde exhibited a new illuminator, Simons', which was easily and quickly adjusted to the various requirements of microscopic illumination.

Gleanings.

TREATMENT OF ENURESIS.—Dr. Sanger, of Leipsic, recommends a course of systematic dilatation of the urethra in cases of enuresis both in women and female children. His plan is to introduce a metal catheter well into the bladder, keeping the thumb over the aperture. The instrument is then firmly pressed backwards and to each side from eight to a dozen times. It is, of course, useless to make any pressure anteriorly, as the pubes lie immediately in front. Ten or twelve sittings are usually sufficient. During the treatment the patient is desired to control the sphincter as much as possible by means of the will, to take but little to drink and to keep the abdomen warm. The good effects of this mechanical system of treatment are to be ascribed to increased power gained by the sphincter in consequence of its contractions after dilatation and stimulation. This method is useful where the paralysis is of central as well as where it is of peripheral origin. Where, however, the neck of the bladder and the whole urethra are of very large caliber, it is useless, and in such cases a plastic operation is required.—*Lancet*.

SULPHONAL IN THE NIGHT SWEATS OF PHTHISIS.—‘Dr. Erede, of Genoa, calls attention to what he calls ‘the marked antidiaphoretic action of sulphonal.’ He says that if given in the early hours of the evening it almost invariably succeeds in suppressing or greatly diminishing the night-sweats of phthisis. A dose of half a gramme, given in the form of pastille or suspended in some gummy vehicle, generally suffices. The largest amount given was one gramme; this failed of its effect only in a very few cases in which the disease was extremely advanced. As no untoward effects were ever noticed, even in very debilitated patients, Erede thinks that with proper precautions the drug might be pushed up to two grammes, the usual hypnotic dose. In

many cases he observed that in discontinuing the sulphonal after a time the sweating did not begin again at once, but only after some days, when it was immediately checked by repeating the medicine. This shows that the organism does not readily adapt itself to the prolonged use of the drug, as it does, for instance, to certain narcotics. Erede is inclined to think that the effect of sulphonal in checking diaphoresis is to be explained by its action on the nervous system."—*Brit. and Col. Druggist*.

CHLORIDE OF GOLD IN LUPUS.—Dr. J. Rüsin (*Meditzinskoie Obozrenie*, No. 5, 1891, p. 509) reports the case of a peasant woman, aged forty, with extensive lupus of thirteen years' standing, successfully treated by the subcutaneous injection of a one per cent. solution of chloride of gold in combination with a one per cent. solution of cyanide of potassium. Nearly the whole face, nose and forehead were involved, the cheeks, forehead and chin and hard palate being studded with ulcers, the discharge from which contained tubercle bacilli. In all, six injections were given in eleven days, the total quantity of either of the salts amounting to $\frac{33}{1000}$ grain, the individual doses of the chloride varying from $\frac{1}{1000}$ to $\frac{1}{100}$ grain, and those of the cyanide from $\frac{1}{1000}$ to $\frac{1}{125}$. On the second day of the treatment the subjective state markedly improved; on the third, the swelling of the face subsided, some old scars began to shed cuticle, and a labial ulcer distinctly decreased; on the sixth, some ulcers on the cheeks and hard palate commenced to heal, while the facial tumefaction and pain disappeared altogether; on the twelfth, several ulcers soundly healed, and the remaining ones became clear and covered with healthy granulations. Of accessory phenomena, there were observed a kind of intoxication, drowsiness, rigor and slight elevation of temperature. These symptoms made their appearance on the fourth day of the treatment, shortly after the injection of $\frac{1}{125}$ grain. They disappeared spontaneously the next day.—*Brit. Med. Journal*.

SAMPLES of Sander & Sons' Eucalypti Extract (Eucalyptol), gratis, through Dr. Sander, Dillon, Ia. Eucalyptol stands foremost as a disinfectant, is a perfect check to inflammatory action, and invaluable in zymotic diseases. Meyer Brothers Drug Company, St. Louis, Mo., sole agents.

AMPUTATION OF THE PREGNANT UTERUS AT TERM, WITH INTRA-PERITONEAL TREATMENT OF STUMP.—H. M. Milton, M. R. C. S. *The Lancet*. A primipara, aged twenty-three, had been in labor about four days, and was completely collapsed, but conscious, her pulse being easily felt. The pelvis was osteomalacic, and the rami of the pubis so approximated that three fingers could only be introduced with difficulty. Three days before, the membranes had ruptured and the head was jammed on the pelvis. As abdominal section gave the only possible chance for delivery, it was decided to try this method.

Chloroform being administered, the abdominal walls were incised up to two inches above the umbilicus. The uterus was made to protrude, and turned to the right, bringing into view the huge vessels of the left broad ligament stretched on the distended uterus, a closed artery forcep easily passing under them, piercing the broad ligament and raising the vessels from the uterus. One handle of the artery forceps was then passed beneath them, and the two handles held ready to be clamped when required. The uterus was then turned to the left, and the vessels of the right broad ligament similarly treated. The placenta was found at the top of the uterus, and the uterine wall incised below its attachment. The opening in the uterus being enlarged, the dead child was easily removed, the artery forceps holding the vessels of the broad ligament being clamped. The uterus was cut across, a little above the reflection of the peritoneum on to the bladder. No bleeding occurred except as the uterine arteries and veins on either side were cut across. Water was used to wash out the stump of the uterus, draining through the vagina. The vessels of the broad ligaments, already clamped, were separated and tied with silk, and the edges of the stump were sewn together with a continuous catgut suture, the peritoneum united over it with a continuous Lembert silk suture. The peritoneal cavity was cleansed, a drainage tube inserted, and the abdominal wound closed. The patient lived about twelve hours after operation.

As a local anæsthetic in dental practice, Dr. C. G. Meacher uses a five per cent. aqueous solution of phenol (carbolic acid). He prefers it to cocaine, as it is powerful and not attended with dangerous symptoms.—*Bulletin of Pharmacy*.

Book Notices

SURGERY. Its Theory and Practice. By William Johnson Walsham, F.R.C.S., Assistant Surgeon to St. Bartholomew's Hospital; Surgeon in Charge of the Orthopedic Department and Demonstrator of Practical Surgery at St. Bartholomew's Hospital, etc. Third Edition, Revised and Enlarged. Three Hundred and Eighteen Illustrations. 12mo. Pp. 748. Philadelphia: P. Blakiston, Son & Co. Cincinnati: R. Clarke & Co. Price, \$3.00.

The object of this work on surgery will be best explained by copying from the author's preface to the first edition:

"When asked by the publishers to write a small book on surgery for their Student's Guide Series, I readily undertook the task, since as a teacher of surgery I had for some time felt that a work of the kind would be useful to the student when first entering on the study of that subject. The textbooks in general use have, with the advance of surgery in recent years, grown to such a length that many months are required even to read them through, and it is quite impossible for the student to master them during the comparatively limited period allotted to dressing in the wards and outpatient room. The present work is designed to aid him in gaining a general insight into the theory and practice of surgery, while he is yet engaged in practical work in the wards; at a time, that is, when such a knowledge should be of especial value to him."

To fulfill his purpose to prepare a work on surgery for medical students with which they could become familiar during their studentship while engaged in the study of other branches of medicine, it was necessary for the author to present the various subjects in as brief and concise manner as possible; but while so doing he has not lost sight of perspicuity, but has made the various subjects as plain as possible. In fact, the work has been abbreviated more by avoiding discussions of unsettled questions, and omitting quotations of the views of writers in confirmation of the positions taken, than by not entering into details enough to elucidate clearly the principles which underlie the science and art of surgery. The demonstrations are all clear and expressed in very plain language. Students will undoubtedly take great pleasure in studying the work.

For ligatures the author expresses a preference for carbolized ox-aorta or kangaroo-tail tendon. But he says that the best material can hardly be said to have been determined. "I have always used kangaroo-tail tendon myself," he states, "and have found it answer admirably." Formerly, when ordinary silk ligature was used, one end of the ligature was left out of the wound by which the ligature might be removed when it had cut its way through the vessel. Now, however, when an aseptic ligature is used, both ends should be cut short, as the ligature will become absorbed, organized, or encysted. The wound should be accurately united, drained if deep, and dressed antiseptically.

In England this work proved so popular with medical students that only a little over a year elapsed between the second and third editions.

A MANUAL OF HYPODERMATIC MEDICATION: THE TREATMENT OF DISEASES BY THE HYPERDOMATIC OR SUBCUTANEOUS METHOD. By Roberts Bartholow, A.M.; M.D., LL.D., Emeritus Professor of Materia Medica, General Therapeutics and Hygiene in the Jefferson Medical College of Philadelphia; Honorary Fellow of the Royal Medical Society of Edinburgh; Honorary Member of the *Societe Medico-Pratique de Paris*, etc. Fifth Edition. Revised and Enlarged. 8vo. Pp. 540. Cloth. Philadelphia: J. B. Lippincott Company. Price, \$3.00.

The author of this work was a resident of Cincinnati when he wrote this work, and continued residing here until after the publication of the second edition. To judge from the fifth edition, which he has prepared and which has just been published, his powers of mind, notwithstanding his continuous arduous intellectual labors for many years, seem to be as robust and brilliant as ever. The constant, unceasing brain labor performed by him, to our personal knowledge, year in and year out since he became a medical writer, would have paralyzed the mental faculties of nineteen men in twenty.

Many important alterations have been made in this edition. In fact, the volume has been recast; many of the articles have been rewritten, much new matter has been introduced, and the various remedies have been arranged according to the terms of a classification compiled for this purpose. These changes, we are informed, have increased

the size of the book by about two hundred pages, and as the page has been enlarged in both directions, the capacity of the book has been materially enhanced.

Hypodermatic medication has assumed such importance, and its employment has become so general, that there is scarcely any physician that does not consider it a necessary means in the practice of medicine. Where is there a physician who would think that he could satisfactorily discharge all his duties as a physician—fulfill all the indications which he would meet in diseases—if deprived of the use of the hypodermatic syringe? But employing remedies by subcutaneous injection must be made a subject of special study by every physician before he can venture to use therapeutic agents in that manner.

Prof. Bartholow's work on hypodermatic medication is the only classical, reliable work upon the subject with which we are acquainted. It is very largely an original work, for the facts contained in it are the results mainly of his own researches, and where in a few instances this has not been the case, they have been confirmed by his own investigations. The work is an authority both in this country and in Europe. There is no writer who ventures to dissent from its teachings.

Prof. Bartholow discards the expression "hypodermic" as incorrect, stating that the word "hypodermatic" is the correct one.

PTOMAINES, LEUCOMAINES, AND BACTERIAL PROTEIDS; OR, THE CHEMICAL FACTORS IN THE CAUSATION OF DISEASE. By Victor C. Vaughan, Ph.D., M.D., Professor of Hygiene and Physiological Chemistry in the University of Michigan, etc.; and Frederick G. Novy, Sc.D., M.D., Assistant Professor of Hygiene and Physiological Chemistry in the University of Michigan. Second Edition, Revised and Enlarged. 8vo. Pp. 391. Cloth. Philadelphia: Lea Brothers & Co. Cincinnati: R. Clarke & Co. Price, \$

In the first chapter of this work a ptomaine is defined as a chemical compound which is basic in character, and which is formed by the action of bacteria on organic matter. On account of their basic properties, in which they resemble the vegetable alkaloids (that is, we presume, by combining with acids and forming chemical salts), ptomaines may be called putrefactive alkaloids. They have been improperly called

animal alkaloids by some, because, first, some of them are formed in the putrefaction of vegetable matter; and second, the term "animal alkaloid" is more properly restricted to the leucomaines—those basic substances which result from tissue metabolism in the body. While some of the ptomaines are highly poisonous, this is not an essential property, and others are wholly inert. Indeed, the greater number of those which have been isolated, up to the present time, do not, when employed in single doses, produce any apparently harmful effects. Brieger, in fact, the authors state, restricts the term ptomaine to the non-poisonous basic products, and designates the poisonous ones as "toxines." But such a classification is of doubtful utility; for it is not always easy to say what bodies are poisonous and what are not.

All ptomaines contain nitrogen as an essential part of their basic character. In this they resemble the vegetable alkaloids. Some contain oxygen, while others do not. Since all putrefaction is due to the action of bacteria, it follows that all ptomaines result from the growth of these microorganisms. The kind of ptomaine formed will depend upon the individual bacterium engaged in its production, the nature of the material being acted upon, and the conditions under which the putrefaction goes on, and the duration of the process.

Chapter IV. of the work is devoted to the general considerations of the relation of bacterial poisons to infectious diseases. The fact is recognized that germs bear a causal relation to some diseases—thereupon the question arises, how do these organisms produce disease?—how does the bacillus anthracis induce the symptoms of the disease and death?

It was inferred by Bollinger that the bacilli produce the diseased condition simply by accumulating in large numbers in such important organs as the kidneys, liver, spleen, and lungs, and mechanically interrupting their functions. He was led to this conclusion from the fact that if a properly stained section of a kidney taken from a guinea-pig, which has been inoculated with the bacillus anthracis, be examined under a microscope, the bacilli will be found to be present in such large numbers that they form emboli, which not only close, but actually distend the capillaries and larger blood-vessels, and interfere with the normal functions of the organ. A similar condition is sometimes found on microscopical examination of the liver, spleen and lungs. But facts which have been evolved by more recent researches have

not only disproved the correctness of Bollinger's theory, but the theories of other investigators which have been advanced.

Detecting the vital deficiencies in the theories which have been advanced by various pathologists, and being impressed by the results obtained by the chemical study of putrefaction, bacteriologists have been led to inquire into the possibility of the symptoms of the infectious diseases being due to chemical poisons.

The readers of the MEDICAL NEWS will find confirmation of the above statement by the authors of the work on our table by referring to a published lecture in the *Lancet* of November 21 (last month), by Dr. J. Burdon Sanderson, Professor in the University of Oxford, England. He says, in discussing the "Progress of Discovery Relating to the Origin and Nature of Infectious Diseases": "The purpose which I had in view in my last lecture was to show that, even in those instances in which the influence of microphytes in exciting processes of disease appears to be most direct, the proximate cause of the morbid action is always chemical."

For ten years there have been frequent allusions in medical journals and works upon medicine in regard to ptomaines and their poisonous effects, yet many physicians seem to know but little about them—how they originate, in what they consist, etc. It has been the aim of the author of this work to collect, arrange, and systematize the facts concerning ptomaines and leucomaines. Although, as they state, many short essays, some of them of considerable value, have been written for the purpose of explaining what ptomaines and leucomaines are, and describing the phenomena following their absorption into the system, yet the present work may be regarded as the first attempt to make a collection that will embrace everything of importance on the subject. In endeavoring to accomplish their object, they have met with many difficulties. They have been compelled to search through the pages of medical and scientific journals, transactions of societies, monographs, government reports, etc., to get possession of all the facts, and to be able to present them to their readers. That their labors have been acceptable to the medical profession is evident from the fact that in three years, or less, a second edition of the work has been called for.

No physician can be regarded as an intelligent medical man who has not a knowledge of the results of the researches in bacteriology that have been made by investigators during

the last ten or twelve years. But it is not sufficient merely to know a few facts in regard to the "germ theory" of disease. A physician should be familiar with the discoveries that have been made as regards *bacterial poisons*—the toxic results of the action of bacteria on organic matter. But to learn about these from the allusions made to them by writers in medical journals would be a task of great labor. A text-book is needed; in fact, it is as much needed as a text-book is needed in the study of anatomy, or in the study of surgery. The work of Profs. Vaughan and Novy constitutes a text-book that will meet the wants of medical students and physicians in acquiring a satisfactory knowledge of all that has been demonstrated by investigators in regard to bacteriology and the toxic effects of the action of bacteria upon organic matter.

Editorial.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.—We are requested by the secretary, Dr. F. C. Curtis, of Albany, N. Y., to announce that this organization will meet at Albany, February 2, 3 and 4, 1892. The following gentlemen have been appointed the business committee: Seneca D. Powell, M.D., No. 12 W. 40th street, New York; James D. Spencer, M.D., Watertown, N. Y., and Franklin Townsend, Jr., M.D., No. 2 Park Place, Albany. Any communication regarding papers or any matter pertaining to the business of the society, which should properly come before the business committee, should be addressed to Dr. Seneca D. Powell, 12 W. 40th street, New York City.

PRESCRIPTION WRITING.—The *Therapeutic Gazette* states, in an editorial, that nowadays simplicity in prescription writing seems to be especially cultivated in the practice of the best physicians; and the prescriber is content, it may be, with one "adjuvant" or "corrigent," and almost any convenient "vehicle." The long, often heterogeneous and absurd recipes of a former age are no more heard of, the ingredients are few in number, and "direct medication" is attempted.

Legibility in prescription writing is just as much a desideratum as ever. A melancholy accident is related that occurred about two years ago in Paris, where a medical man

wrote for one gramme of antipyrin. The chirography was so execrable that the word *antipyrin* was mistaken by the druggist for *atropine*, and a gramme of the latter was administered, with resulting death of the patient. There can be no excuse for the slovenly manner in which some physicians write their prescriptions.

THE KEELEY CURE.—The New York *Sun* and the Chicago *Herald* stand alone among the great daily newspapers in demanding that Dr. Leslie E. Keeley prove himself the benefactor of mankind, which he claims to be, and make public his treatment for alcoholism. In an interview published in an evening paper in this city recently, Dr. Keeley posed as the possessor of a secret revealed by the Most High for the good of the mothers, wives and sisters of men. In this the *Herald* sees cant, pure and unadulterated, and says so in the plainest of English. Just as these powerful moulders of public opinion take so decided and reasonable a stand, comes the news of the death of Col. Mines, the most noted apostle of the "cure." The current number of the *North American Review* contains an article by Col. Mines describing the treatment, and lauding the inventor in the highest terms. At the time the *Review* went to press, Col. Mines was rolling in the gutter, from which he was fished, and sent to Blackwell's Island, where he died from alcoholism. He belongs to the "five per cent." for whom Keeley claims there is no cure. Returns from other members of the "five per cent." will continue to come in. Dr. Waugh finds good in the agitation of the Keeley cure because it will attract attention to the treatment of inebriety and to the work done in that specialty by Crothers and others. The public will learn in time that there are men in the ranks of the regular profession who are not the possessors of revelations from on high, but who, nevertheless, treat and cure inebriates.—*Western Med. Reporter*.

DEHORNING CATTLE.—Owners of cattle very frequently dehorn them, alleging that it is not a cruel act. The Humane Society of Cincinnati, however, has again and again protested against the practice, and threatened the cattlemen with prosecution. Finally, the society had three stock dealers arrested on the charge of dehorning cattle, and the case was brought before Judge Gregg of the Police Court. Witnesses for the defendant, while not denying the fact that the

operation was a painful one, justified it on the ground that it was necessary.

Judge Gregg gave the question much reflection and decided it after carefully reviewing the precedents known in law, finding the defendants guilty. He said: "Who could read this testimony, and reflect for a moment upon the agony endured by the unfortunate beast as the saw tears its way through membranes, blood-vessels, arteries and nerves, without being painfully touched with commiseration for the dumb creature in its misery and distress? If such cruelty is to be justified or sanctioned on the ground of necessity, surely the necessity must be great, so great, in fact, as to amount to a public necessity. Private interests can not justify it. Convenience and profit to the owner and dealer will not suffice. There must be a certain and substantial benefit to the animal itself, or to the community amounting to a public necessity."

He quoted Lord Coleridge as follows: "That without which an animal can not attain its full development or be fitted for its ordinary use may fairly come within the term necessary." He then continued: "The mutilation of horses, bulls and the male of many species is necessary, and undoubtedly lawful, for without it they could not be fully developed and fitted for their ordinary use to man. But from time immemorial the people of the world have eaten of the flesh of horned cattle, and thrived on it; shippers and buyers have dealt in them and prospered, and why it should now so suddenly become a necessity within the meaning of the law is beyond my comprehension."

Attorney E. P. Bradstreet ably conducted the case before the Court. He is the legal counselor of the society, and he very seldom ever loses a case. As regards the dehorning of cattle, those who have been practicing it have been gathering all the evidence in their power to prove that it subserved a beneficial purpose and had no elements of cruelty in it. To successfully meet their evidence required no little research and labor—much investigation of the literature upon the subject.

Dr. John A. Thacker.

DR. JOHN ADAMS THACKER, the editor, proprietor and founder of THE CINCINNATI MEDICAL NEWS, died at his residence, No. 121 West Seventh street, Cincinnati, Saturday, December 19, A. D. 1891.

This melancholy announcement will be a source of startling surprise and of mournful regret to the many hundreds of friends of the deceased, who have not heard of Dr. Thacker's brief illness and who have looked upon him as being only in the fruition of his powers. It has been but a few short days since he was engaged in the active duties of his profession, was concerned in some important changes in his household arrangements, and was busied with closing the current volume of the NEWS, a part of the index of which had been prepared by himself. It was in the midst of this task that the fatal illness overtook him. The onset of the illness presented all the characteristic symptoms of "La Grippe," which speedily developed a pneumonia. Dr. Thacker was in no condition to stand the inroads of either of these diseases. Those who had noticed him closely for the last few months had marked a gradually developing anæmia. When, therefore, he was seized with a malady which is proving fatal to even the robust, it found him in condition to become an easy prey—so easy indeed that the end came before many of his nearest friends could be warned of the impending crisis.

Dr. Thacker was born at Goshen, Clermont Co., O., January 1, 1833. He was the son of Dr. John Thacker. A few facts alone enable us to discern in the father certain

traits which might have been taken as prophecies of the son. Thus, at the time of the senior Dr. Thacker's pupilage in medicine, the old system of instruction by apprenticeship to a preceptor was, of necessity, in vogue, while the opportunities for acquiring the doctorate from a recognized institution of learning were both difficult and expensive. The nearest available institution was the old Transylvania University at Lexington, and, almost without clinical facilities, it could not impart the instruction that was calculated to satisfy the conscientious aspirant for professional honor. In this dilemma the young practitioner, in the wilds of a new State, applied himself to his books with renewed zeal, studied his materia medica in the fields and the forests with fresh assiduity, and acquired a familiarity with disease by bedside observations in the abodes of the frontiersmen. Having by these humble but effective means acquired a knowledge of his profession, he voluntarily applied to the then existing Southern Ohio Medical Society for examination, and was granted a diploma signed by Dr. Daniel Drake as president. The avenues to professional distinction were not at that time and place either broad or frequent. The position of most considerable prominence then was the post of surgeon to the State Militia, and it was in this capacity that Dr. Thacker was twice commissioned. I mention these two circumstances only to show that the subject of my sketch was the son of a man in whom honest and honorable ambition were conspicuous traits, and to find, in that circumstance, a key to a character which, were my pen endowed with a limner's cunning, it were impossible to delineate.

Dr. Thacker has told me on more occasions than one, that from earliest childhood he was imbued with a love for study. His mind evidently showed early tendencies to symmetrical development. In his early school days he became at once fond both of the natural sciences and of the classics. The result was that when he became a student at Wittenberg College he was blessed with a mental grasp which enabled him to at once compass the curriculum of both the scientific and the classical course. This was, however, an ill-advised zeal. With a very large brain and a highly sensitive nervous system, he had but a comparatively meager physical endowment. With this disproportion between brain and brawn, the young enthusiast soon broke down, and with extreme reluctance he had to withdraw for a time from his happy pursuit of knowledge. In the letter of withdrawal

issued by the president the young student is spoken of as "an industrious student and a virtuous young man"—qualities which not only enabled him to regain his health and return and secure the coveted prize, the baccalaurate degree, but which enabled him in later life to secure the still more coveted prize of honorable distinction in his chosen profession.

After this ample preparation, young Thacker became a student at the Miami Medical College, under the galaxy of brilliant men who then comprised its Faculty—among whom were the celebrated Reuben D. Mussey and Jesse P. Judkins. His course of study was as uneventful as that of most young men. At the conclusion of his attendance upon medical lectures he wrote an inaugural thesis on "The Therapeutic Properties of Water." His final examination secured the unanimous vote of the Faculty for his graduation, which took place at Melodeon Hall, February 25, 1856.

Dr. Thacker held a number of important professional appointments. Immediately after graduation he served as interne at the old Commercial Hospital. He then became Medical Officer to Lick Run (now Longview) Asylum for the Insane. It was this appointment that led to his election to the Chair of Psychology at the Cincinnati College of Medicine and Surgery, a position which he occupied with signal ability from the time of his election in 1863 to 1872. In the latter year, upon the demise of Dr. B. S. Lawson, Professor of the Principles and Practice of Medicine, Dr. Thacker was transferred to that chair, which he occupied until 1878, when he resigned. On the reorganization of the Faculty in 1882, he again accepted the Chair of Practice under the Deanship of his friend, Dr. R. C. Stockton Reed, the present executive officer of the school, but relinquished it the following year on account of ill health. Since that time he had delivered occasional lectures before the classes on microscopy, thus showing his continued zeal in the department of science in which he was so conspicuously proficient, and evincing a lingering fondness for the functions of a teacher—functions which he had always discharged with conscientious regard to the welfare of the pupil. He was a Fellow of the American Academy of Medicine, and in 1879 he was, unexpectedly to himself and in recognition of his distinguished labors in microscopy, elected Fellow of the Royal Microscopical Society of England. About 1875 he

had the honorary A.M. conferred upon him by Lafayette College.

Dr. Thacker has long been a conspicuous figure in medical journalism in Cincinnati, he having occupied the editorial tripod continuously for a longer period than any other one man in the history of the city. In 1868, he, in association with Drs. R. C. Stockton Reed, D. D. Bramble and others, organized a "Journal Association," and began the publication of the *Cincinnati Medical Repertory*, with Dr. Thacker as editor. From the outset the new periodical manifested vim and vigor. It at once took a stand for the medical interests of the West as against the then overpowering influence of the East, and it stood as the defender of the interests of medical Cincinnati as against those of all the earth. It was not surprising, therefore, that the young editor soon found himself *vi et armis* with half of the old periodicals, champions of vested interests, resentful of his self-assertion and envious of his manifest ability. Among the first to antagonize him was the *New York Medical Journal* under its old management, which saw fit to reply in a highly satirical vein to certain of Dr. Thacker's editorial observations on the advantages of Cincinnati as a medical center. The next issue of the *Repertory* furnished ample evidence that irony and satire were as handy implements of warfare in the hands of the Cincinnati tyro as they could possibly be to the venerable New York journalist. In the journalistic field no man ever knocked a chip off Dr. Thacker's shoulder but that he found a mighty active individual just under the coat. The result was that controversies soon ceased. But let it be recorded, that while Dr. Thacker was at times open to the charge of aggressiveness, he never could be charged with unfairness. There never was a time when the columns of his journal were not as freely open to his adversary as they were to himself. He was not always himself treated in the same spirit. An article containing certain strictures was about to appear in the *Repertory*, when the gentleman who was being criticised enjoined the issue, securing a temporary restraining order. By the time the writ was returnable, the period of publication would have passed. Dr. Thacker declined to contest the case, and simply issued the matter already set up by substituting the word *News* for *Repertory*, and changing the typographical appearance of the title page. Thus in January, 1872, was born the periodical which has always since commanded

his affectionate regard. As *Repertory* and *News* it has been his constant companion for twenty-four years. There are a number of advertisers who appeared in the first number who have been constant patrons to the present issue, and there are many subscribers whose names have appeared in each consecutive revision of the mailing list. These men were to Dr. Thacker his close personal friends, although most of them he had never seen nor heard from except through usual business communications. The NEWS furnished to him his labor of love. His ideal of a periodical was to make it the disseminator of useful knowledge. He despised the clap-trappery of so-called modern medical journalism. The result of this was that at times his own journal would seem heavy as compared with some frothy sheets on his exchange list; but the redeeming feature of the NEWS is that from the day of its inception its every issue has been freighted with literature that has made it worthy of preservation and valuable for reference.

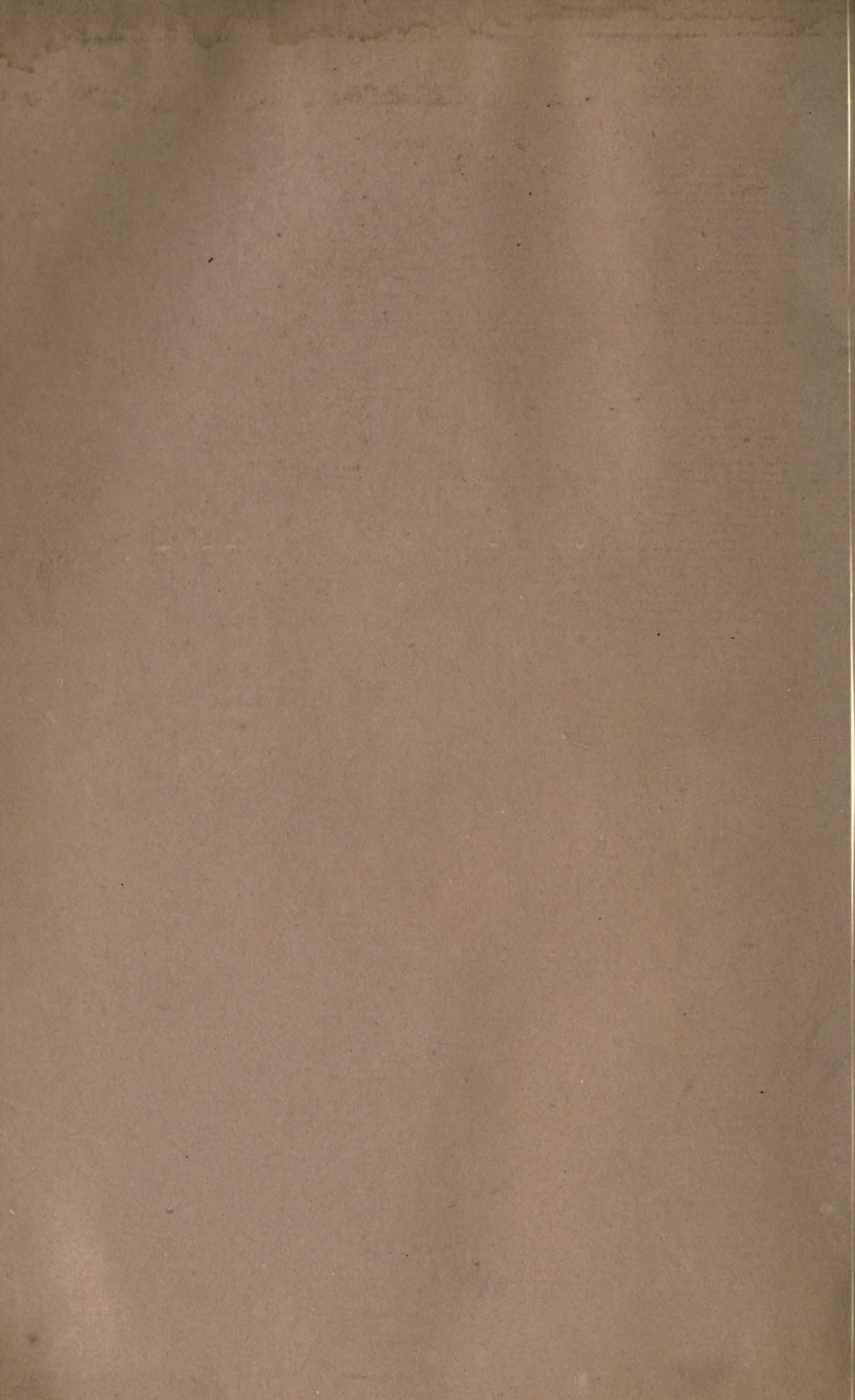
Personally Dr. Thacker was a man of impressive appearance. In stature he was of medium height and slender frame. His head was large, with preponderating frontal development. His hair, in earlier life jet black, had become silvered; while his beard, latterly well bleached, was worn full, and added to the strength of his features. His eyes were searchful and penetrating. He was never given to levity, yet at times, in both conversation and writing, he manifested a keen sense of humor, from which he was wont to carve shafts of irony and satire. He was always studious. Dr. Frank Brunning, of this city, one of his illustrious pupils, has said of him that "his pastime consisted chiefly in reveling in the Greek Testament." He always had one of the old classics in the original in the course of reading. In religion he was reared a Presbyterian, but died in communion with the Episcopal Church.

Dr. Thacker, out of filial regard to an aged mother and an invalid sister, remained unmarried until well advanced in life. These obligations no longer resting upon him, however, he married Miss Rebecca C. Reno, of Walnut Hills, in August, 1879. The union was a most congenial, helpful and happy one. Mrs. Thacker survives her husband.

As his pupil of more than two decades ago, and as the friend of after years, I have sought to pay no tribute to the deceased other than that which may be told in plain, unvarnished narrative. He himself despised empty rhetoric. In

his lectures he was wont to speak in plain perspicuity. In his dealings with men it was his amusement to tear down the mask of hypocrisy. In his dealings with misfortune and misery he had a sympathy for pain and a tear for sorrow. In his dealings with science he was the relentless foe of error. As I close this hasty sketch and think of him with all of his great mind, his great bravery, his great diffidence, his great tenderness, the final thought that occurs to me is that, taken all in all, he was a manly man, he fought a good fight, and he died without malice. *Requiescat in pace.*

CHARLES A. L. REED.



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